

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

{ STAMPED.....SIXPENCE.
{ UNSTAMPED..FIVEPENCE.

Original Correspondence.

COLLIERY INSPECTION, AND TRUCK ACT.

SIR,—One of your correspondents, signing himself "Coalowner," has raised upon the construction of the statute 23 and 24 Vict., c. 151, the important question whether certain clauses of the Truck Act are now in force, and are to be taken as exceptions within the 28th clause of the last-mentioned Act? The short answer is, that as the Truck Act is neither re-vised in nor referred to by the statute 23 and 24 Vict., c. 151, all its provisions exist in full force, and, therefore, that it is still legal for the master to supply, or contract for the supply, to his workpeople of any or all of the matters mentioned and detailed in the 23d and 24th secs. of the Truck Act. The 23d section declares that nothing in the Truck Act mentioned shall extend, or be construed to extend, to prevent any employer of any artificer, or agent of any such employer, from supplying, or contracting to supply, to any such artificer any—

1. Medicine.
2. Medical attendance; or,
3. Fuel, or any
4. Materials, tools, or implements to be by such artificer employed in his trade or occupation, if such artificers be employed in mining; or,
5. Any hay, corn, or other provender to be consumed by any horse, or other beast of burden, employed by any such artificer in his trade and occupation.

6. Nor from *demising* to any artificer, workman, or labourer employed in any of the trades or occupations enumerated in the Truck Act, the whole or any part of any tenement at any rent to be thereon reserved.

7. Nor from supplying, or contracting to supply, to any such artificer any victuals dressed or prepared under the roof of any such employer, and there consumed by such artificer.

8. Nor from making, or contracting to make, any stoppage or deduction from the wages of any such artificer for or in respect of any such rent, or for or in respect of any such medicine, or medical attendance, or for or in respect of any such fuel, materials, tools, implements, hay, corn, or provender, or of any such victuals dressed and prepared under the roof of any such employers, or for or in respect of any money advanced to such artificer for any such purpose as aforesaid.

Provided always that such stoppage or deduction shall not exceed the real and true value of such fuel, materials, tools, implements, hay, corn, and provender, and shall not be in any case made from the wages of such artificer, unless the agreement or contract for such stoppage or deduction shall be in writing, and signed by such artificer.

The following clause, sect. 24, provides that nothing in the Truck Act contained shall extend, or be construed to extend, to prevent any such employer from advancing to any such artificer:—

1. Any money to be by him contributed to any friendly society, or bank for savings, duly established according to law.
2. Nor from advancing to any such artificer any money for his relief in sickness; or,
3. For the education of any child or children of such artificer.
4. Nor from deducting, or contracting to deduct, any sum or sums of money from the wages of such artificers for the education of any such child or children of such artificer, and unless the agreement, or contract for such deduction, be in writing, and signed by such artificer.

From the above analysis of the 23d and 24th clauses, it will be seen that the allowed deductions are in respect of matters the control of which is entirely within the workman's power, and that being so, it would be grossly unfair if, after, for instance, the workman had had the benefit of good medical advice, that the master should not be able to repay himself out of the workman's earnings. The Act, and particularly the above clauses, were passed in the interest of and for the protection of the workmen, and not of the masters; the clauses work well, they are largely enjoyed, and the workmen are greatly benefited by them. Such being the case, it is much to be regretted that there are self-harmful workmen, who having had their money's worth, yet cavil at reimbursing their employers. They must, however, recollect that the above-mentioned deductions are legal, and are not done away with by the recent Act 23 and 24 Vict., cap. 151.

April 4,

T. T.

THE PREVENTION OF GAS EXPLOSIONS IN COLLIERIES.

DRAINAGE OF GASES—"EXPLOSIVE GAS-CONDUCTOR."

SIR,—A thorough and abundant ventilation of the works would, no doubt, greatly tend to prevent many of those dreadful explosions which have been, and it is to be feared still will be, of frequent occurrence, and so destructive to the lives of the hard-working coal miners.

In seams, however, which contain, as it were, reservoirs of explosive gases, or, at least, of the chief ingredients of such, in a highly compressed state, it may be considered as doubtful whether even a perfect ventilation could altogether prevent the calamitous consequences arising from such gases finding an outlet into the workings, and there igniting; and it appears hence desirable that measures should be resorted to of a more comprehensive character, and such as would leave no doubt of their efficiency. The principal one of such measures would obviously consist in draining off the contents of those gas reservoirs; and the operations necessary for that object should not be confined to, and adapted to the requirements and interests of, one or two collieries, but should form part of a general well-considered system, that would at once comprise in its scope the greater part, or the whole, of the strata in which the coal seams are situated. The structural character of and other geological phenomena connected with carboniferous deposits are generally so well known, or can so easily be ascertained, that there cannot be any great difficulty in planning the respective operations, necessary for extracting the dangerous gases from the seams in such a manner as to be best adapted to, and to take the most advantage of, all the peculiar geological features of the coal field that is thus to be operated upon. With respect to the cost of such works, whether they are undertaken by Government—the colliery owners of each district, perhaps, being required to contribute their shares in proportion—or whether they are carried out by all the colliery proprietors of the district combining to that effect, it certainly would appear in every case to be far below the average amount of damage and injury done to property and interests, not to mention the great loss of life which would most effectually be prevented by such measures. While such works, whether they consist in boring, sinking, or driving, &c., should be so adapted to the geological nature of the respective deposits as to insure the full realisation of their object—a thorough draining off of all dangerous gases from the respective seams—they should at the same time be so arranged as to facilitate rather than interfere with the works of extraction of each respective colliery.

There can be no doubt but that in coal seams which have been abundantly "holed" and drained of their gases by a system of works in which the respective coal fields are treated comprehensively as a whole, accidents arising from the explosion of large quantities of pent-up gases will be impossible; and on consideration it can likewise not be doubted that much more comprehensive measures for safety will and must be resorted to sooner or later, perhaps after a number of less simple and less efficient schemes will have been tried in vain.

In the case of collieries where no such general measures for the efficient prevention of explosions have been taken, it appears worth while considering whether such accidents could not be prevented by *purposely firing the gases at once, as soon as they are met with*, but in such a manner as to render their burning harmless; this, I imagine, might be done by employing a large iron cage, one or more sides of which are formed by two sheets of wire-gauze, one some distance behind the other, and in which a flame is kept burning, the cage being connected, by means of pipes or other suitable channels, with an upcast shaft, or any spot where the passage of burnt gases can do no harm, and where their progress is facilitated: owing to such an arrangement the explosive gases would ignite as soon as they enter the cage of the apparatus, but the fire, owing to the double sets of wire-gauze, could not spread to the gases outside, and the burning and burnt gases would rush off, through the pipes or other channels contrived for that purpose, to places where they are harmless, and in this manner the quantity of explosive gas would be carried off, and the explosion itself be diverted, as it were, of all its danger. Of course the air-channels through which the burning and burnt gases are led away should be of sufficiently large diameter so as to make allowance for the expansion of the gases. In such parts of the works where those burnt gases could not conveniently be led (say) to the surface, the burning apparatus, or "explosive gas-conductor," might be so arranged that the burnt gases, after having sufficiently cooled down, are led back again to the spot where the explosive gases exist, and, mingling with the same, tend to choke their fiery nature.

I imagine that the principle of burning the gases by means of an appropriate apparatus is easier to be carried out in practice, and, on account of its very simplicity, far more efficient than most other schemes; such, for

example, by which the disarmament of those dangerous gases is to be effected by a more complicated chemical action.

April 3.

GUSTAV JULIUS GUNTHER.

THE VENTILATION OF COAL MINES.

SIR,—I have stated before that the ventilation at Risca should exhaust 48,858 cubic feet, at the rate of eight strokes per minute—that is, with air at its natural pressure. But with a difference of pressure of 4 in. of water column (the total height of water column, equal to 30 in. of mercury, being 33.92 feet—407 in.) the loss from rarefaction in this case will be 1 in 102 parts nearly, or 479 cubic feet, leaving 48,379 cubic feet, which should be realised. But Mr. Morgan, on Jan. 24, realised only 44,752 cubic feet at 4 in. pressure. Then 48,379—44,752—a further loss of 3627 cubic feet, or 74 per cent. It may be observed that one stroke of the ventilators at the above pressure should produce 6047 cubic feet, and the above loss may be accounted for from the speed of the machines not being taken with extreme accuracy, or from defect in the action of the machines. If the air became more throttled than it was on Jan. 24, the pressure would then exceed 4 in. of water column, and the engine would perform a less number of strokes. It has been stated that eight strokes per minute is the limit to which in practice the ventilators could be driven, but if eight strokes were obtained at a pressure of 4 in. of water they might be safely driven at greater speed with 1 inch pressure. I make the entire loss from friction and other causes to be equal to 18-horse power out of 46—39 per cent., if the data furnished be correct.

I must refer again to Dr. Ure's "Supplement to Dictionary," page 261: in the fifth paragraph the beneficial effects of condensed air are ably shown. The remarks apply more particularly to the ventilation of public buildings, but as the principle has been tried to some extent, I should be glad to learn if 4 in. pressure of water be required in a mine on the rarefying principle, what pressure above 4 in. would be required on the condensing principle to put the same quantity of air in circulation. M. B. GARDNER.

April 1.

IS THE DAVY LAMP SAFE IN STRONG CURRENTS OF GAS?

SIR,—In last week's Journal there is a letter, signed "Colliery Manager," respecting Davy lamps in strong currents. An instance is given by the writer where an explosion, he seems to think, occurred at a perfect lamp, owing to contact with a strong current. I beg to say that, from long experience, I have the strongest confidence in the Davy lamp, and also numerous experiments have been made with the lamp which prove conclusively that an explosion can never occur with a perfect lamp, if ordinary care be taken. But the case he adduces, to my mind, affords another solution of the question as to how the explosion occurred. The tunnel, or drift, was closed with masonry for the purpose of extinguishing a fire at a blower of gas. Now this is a very difficult operation; the greatest care is requisite in order to get the place hermetically sealed. The least crack or space will admit air, and so prevent the purpose being effected; again, the opening out of the stopping is always a hazardous affair, and several explosions have occurred when this has been attempted. A considerable time should always elapse before this is attempted, and the greatest care exercised when it is done, by the use of thermometers, &c.—from a week to three months is the time generally allowed. But in the case cited only a few hours elapsed from the closing of the place until it was again opened. My view of the case is this—The gas, and perhaps coal, was still burning when the stopping was taken out, and a considerable quantity of gas had collected in the tunnel, and on the admission of a plentiful supply of oxygen by the opening the explosion would naturally follow. This has occurred frequently, and it is only reasonable to suppose this to be the real solution.

COLLIERY VIEWER.

CORNISH DRY ASSAY—"SMELTERS' PROFITS."

SIR,—In reply to the remarks of "One in the Trade," in the Journal of March 16, I beg to disclaim any wish to make unnecessary parade of the grievances of the miner, or to attack the interests of the smelters; but the experiments of Mr. Henderson having led to the conclusion that the present mode of using common salt in the assaying of copper ore caused a considerable waste of copper, I felt it due to my Cornish friends to call their attention to it. I had no intention of charging the smelter with making unfair profits, nor did I make any allusion whatever to the practice of claiming 21 cwt. as the ton of ore; but it does seem rather strange that in assaying an ore a fictitious value is sought for the purpose of the purchaser, rather than the real one, an anomaly which I think exists in no other trade. Surely, with all these advantages, the smelter ought to make a profit, even at present prices.

My time will not allow me to go into details, or I think I could show that the smelters' profits are not such a "myth" as to prevent "One in the Trade" from retaining his interest in them. A look at the list of purchasers will disclose names of those who formerly existed as miners only; and I understand that a new firm is about to commence, composed of persons acquainted with the trade, and of at least one miner. "One in the Trade" should not be too sure; the miners may yet "bell the cat," and smelt their own ores in the bargain; they will then be able to take care of their own surplus copper.

Myrtle-street, Liverpool, March 30.

W. RICKARD.

PROSPECTS OF SILVER MINES.

SIR,—Adverting to the new chemical discovery, I have, so far as opportunity offered, gone into the statistics, financial position, prospects, &c., of our home and foreign silver mines. To all the recent chemical discovery of the existence of oxide of silver will be a great boon—for example, the shares of the Cornish Silver Vein Mine are in consequence already at a premium of 1000 per cent.; but in one case especially the effects will be incalculable, I refer to the United Mexican Mines. From reliable authority I have ascertained that an enormous quantity of unrefined gossan had accumulated in the vicinity of the United Mines during a series of years, in consequence of the amount of pure or unoxidised metal it contained not being sufficient in quantity to render the process of its extraction remunerative; but, from the march of improvement, and the application of chemical science, this mass of discarded gossan will, in all probability, prove itself a veritable "mine of wealth," so valuable, indeed, that as soon as ever the proper process is brought to bear upon it the yield will be perfectly wonderful. Thus, what between the present altered and brightened prospects of the mines themselves, and the prospective conversion of the oxide contained in this huge waste mass of gossan into metallic bar-silver, it is, I think, a legitimate deduction when I assert that these mines will prove one of the most valuable known mineral properties in the world. The astounding fact to me being that the shares should be below par; it cannot, however, be long before they will be at the same proportionate premium as they now are at a discount. PHILOS.

NATURAL OXIDE OF SILVER.

SIR,—Your correspondent, "Chemicus," appears to be labouring under an erroneous impression. Natural oxide of silver has been well known for many years to those engaged in silver mines. It is often found in a state of fine dark powder, accompanied with minute grains of metallic silver in the oxidated parts of mineral veins, especially near the surface. Not only is it found in argentiferous veins in south America, Mexico, Spain, and Germany, but also in some of the iron and copper gossans of Devon and Cornwall. When such gossans are found by assay rich enough to pay for extracting the silver, they are bought by parties who are engaged in the reduction of silver ores. It matters not in what state the silver may be in the raw material—sulphuret, chlorate, sulphate, oxide, or metallic—a dry wet assay, carefully done, will show the true contents, if the whole bulk be properly ground, mixed, and sampled. If anyone has discovered a method by which he can make 13 ozs. equal to 118 ozs., I would recommend him to keep the secret, confine himself to his private laboratory, and not trouble himself about gossans or oxide of silver in copper lodes. Some time ago similar attempts were made to enrich quartz with gold, and the public were told that quartz containing only $\frac{1}{2}$ oz. of gold per ton by assay was made, by a secret process, to produce 20 ozs. per ton.

I recommend "Chemicus" to enquire further into this question, and to ascertain what are the difficulties attending the reduction of minerals, gossans, and slate containing only 10 or 20 ozs. of silver per ton with profit. If "Chemicus" can show that a method has been discovered by which poor silver ores can be concentrated to the value required to pay for the extraction of silver, I shall be happy to hear from him, and make arrangements to supply the ores in any quantity, so that the operation may be carried on on such a scale as would be remunerative to himself and the company. I can furnish him with our present cost of extraction, whether by patio, barrel amalgamation, or smelting. What is the cost for extract-

ing silver from a ton of raw material by the new process? How many tons have been reduced to prove the merits of the new system?

Clarendon-gardens, April 2.

EVAN HOPKINS.

NATURAL OXIDE OF SILVER.

SIR,—The importance to many of your readers of such a discovery of natural oxide of silver as is asserted in the letter of "Chemicus," in last week's Journal, cannot be overrated. The letter, however, is so provokingly silent as to the ores, the refuse, the method of reduction, and as to when, where, and by whom the experiments were made, that the truthfulness of the discovery must already be the source of much anxiety to many; and the writer would render great service if he will supply such information as may justify the expectations raised, and render the discovery available. J. P.

NATURAL OXIDE OF SILVER.

SIR,—I have noticed several letters, both in the *Times* and *Mining Journal*, on this subject. It is a great pity that something cannot be done to test, practically, whether there is anything or not in "Squire's process." All practical men whom I have spoken to on the subject utterly ignore it. One thing seems pretty clear—that the idea of Mr. Squire's assay showing more silver than others must be fallacious, as the usual process of wet assay would test the whole quantity of silver, no matter how it exists, whether as oxide, chloride, sulphuret, or in any other form. Mr. Squire, however, may have discovered some process by which argentiferous gossans, and such descriptions of ores, can be treated to more advantage than is now the case. At present the smelters will only pay for silver when the mineral contains over 16 ozs. per ton, so that for mineral containing 20 ozs., which ought to be worth 41. per ton, at the lowest, they will only give 11. If there be a bona fide process for treating poor silver ores profitably, the sooner it is made public the better. There ought to be something in the process to make the Silver Vein Company's shares 21. premium on 5s. paid. 43, Moorgate-street, April 4. J. T. P. PECHREY.

OXIDE OF SILVER.

SIR,—Your correspondent, "Chemicus," in his letter upon the oxide of silver, has made such an important and extraordinary statement, that I feel bound to ask him a few questions. The non-affinity the precious metals have for oxygen, the difficulty with which they are oxidised, and the rapidity that when once oxidised they liberate themselves from the oxygen and become native, cause them to be extreme rarities in nature.

Gold as an oxide in nature has, I believe, never been claimed as a discovery by any chemist, ancient or modern; in fact, there is no formation, or no combination, that I have ever investigated which would allow gold to exist as an oxide the space of a second. The affinities of silver for oxygen are so slight that it has been proclaimed by chemists to be an impossibility in nature, and only to be found as an artificial production made by the stronger acids used in the laboratory; for natural acids, weak and dilute, and a gentle, slow electro-chemical decomposition that is constantly at work in veins more or less assisted by the infiltration of water, are not powerful enough to cause the union of bodies so antagonistic to one another.

Your correspondent, however, speaks of oxide of silver "in enormous quantities," and talks of 113 ozs. of silver instead of 13 ozs. to the ton, as in the former instance, where the oxide of silver had been ignored. I would ask him in what peculiar combination, whether in lime, granite, slate, &c., have these "enormous quantities" of oxide of silver been hermetically sealed. He says that the cost of reduction of this oxide of silver is relatively so small as to render the expense merely nominal. In that statement I perfectly agree, for the oxide of silver would, under most circumstances, reduce itself, and, therefore, the cost must be but a trifle. That oxide of silver does exist in nature I am bound to allow, but in such extremely small quantities, and under such peculiar conditions, that it must be treated more as an accidental exception. I discovered it in a gold and silver vein crossing the bed of the Tumut, in Australia, and in close proximity to layers of native gold, and small crystals of native tellurium; but the quantity was so small as not to be of the slightest commercial interest. I again found a very small portion, with some carbonate of silver, in one of the Tres Puntas Mines, in Atacama. I had likewise the pleasure of detecting the presence of oxide of silver in company with carbonate from Real de Catorce, in Mexico, but in no one instance was the specimen of the slightest commercial value, and was always at some distance from the oxidisable metals—viz., manganese, iron, copper, &c. Lead, whose affinity for oxygen may be some 600 times greater than silver, is also rare as a natural oxide; and although I have upwards of 100 localities for its existence in that state, it is always more or less in extremely small quantities, and in most instances slight incrustations.

In one thing I heartily concur with your correspondent—the vast quantity of metal that is cast aside in ores that have hitherto been rejected as useless. There is a wide field open to anyone to introduce some economical method of treating rich refuse. As to the existence of enormous quantities of natural oxide of silver, I can only say that it must be extremely local, and the result from such a deposit, using his own term, "would be almost fabulous."—April 4. JOHN CALVERT.

THE COPPER TRADE—PRESENT AND FUTURE.

SIR,—I notice in the Journal of March 23 an article under this heading, signed "Copper," which obliges me by inserting in your next my reply thereto. Your correspondent asserts that the palmy days of Lake Superior mines are gone. He believes that the mines are not exhausted yet; but in his opinion it is evident, from the reports of the respective managers (made for 1859), that they show a still further diminution; and as the day of their glory is past, it is, perhaps, for this reason that the American adventurers, by means of their agent, are proposing now to make them over to Europeans. I consulted all the reports of the year 1859, and I did not read any such thing; on the contrary, I see an increase of production in almost every mine. In answer to this erroneous statement, as I have on hand all the official reports and statistics of the production for fifteen years past, I will present to your numerous readers the official returns of the product of Lake Superior copper mines from 1845 to 1860:—

1845	.....Lbs.	1300	1853	.....Tons	2525
1846	.....Tons	29	1854	.....Tons	3600
1847	.....Tons	229	1855	.....Tons	4544
1848	.....Tons	516	1856	.....Tons	5357
1849	.....Tons	640	1857	.....Tons	6094
1850	.....Tons	743	1858	.....Tons	6025
1851	.....Tons	873	1859	.....Tons	6245
1852	.....Tons	953	1860	.....Tons	8530

This product yielded 75 per cent. of refined copper. Besides this, at several mines a very large quantity of mineral-bearing rock has been thrown out, which will yield a fair percentage of copper, when the company are prepared with the proper machinery to stamp and wash the same; it will probably amount to many hundreds of tons of pure copper. The quality of the copper produced from the mines is equal, if not superior, to that found in any other part of the world; being in a native state, and not in ores, it is entirely free from arsenic, sulphur, or any other deleterious substance. In some of the mines considerable silver is found; and it is believed by many that when the country has been thoroughly explored extensive mines of this precious metal will be discovered. Enough is now known of this mining district to render it certain that during the next ten years the product of the mines of Lake Superior will be more than doubled, and the Upper Peninsula of Michigan will take its rank as one of the most productive copper and iron regions in the world; and this notwithstanding the efforts of "Copper" to depreciate our mines.

The object of the Ontonagon Mining District Association (which is composed of the most honourable men of the Lake Superior district, among them many Cornish captains superintending our best mines) in sending an agent to Europe was to diffuse true and exact information on the climate, soil, resources, development of our mines, commerce, and future of the Upper Peninsula of Michigan. Less than 24 years ago this territory became a part of the State of Michigan; at that time it was considered a comparatively worthless territory. The man who would have predicted the development that has followed—the opening of rich exhaustless wealth, the existence of flourishing villages, the seats of future cities, and its already large commerce—would have been called a foolish dreamer. All this great work—to open this extensive territory, explore the mineral rocks, and search the metalliferous veins—has been done by a few hundred hardy pioneers, and with a small capital, in comparison with the magnitude and difficulty of the enterprise. A great number of Cornish miners (not so blind and incredulous as "Copper"), having been informed in time of the rich deposits of Lake Superior, came to that interesting country for them in search of work, and have taken a large part in the exploration and working of the mines of the country. At Minnesota Mine, the mining works are conducted by Capt. Wm. Harris, assisted by Capt. Dunn and Weeks; at Rockland Mine, the works are conducted by Capt. E. Jennings, assisted by Capt. Hall; at National Mine, Capt. J. Chynoweth; at Toltec, Capt. H. Buzzo; at the Ridge, Capt. Martin; at the Adventure, Capt. Ingram; one and all Cornish gentlemen. At the Cliff, Fawcett, Copper Falls, and others, all the mining works are superintended by able and competent Cornish captains; a valuable body of men for the Lake Superior country and for the companies, and possessed of a large amount of practical knowledge and long experience in mining. Five thousand Cornish miners, with their families, are established in the three mineral districts of Ontonagon, Portage Lake, and Keweenaw Point, also in the iron mines of Marquette. There are at the present time a great many Cornish miners enjoying the benefit of wealth and honourable independence, the result of their faithful labours, and also of their mineralogical knowledge, which has served them so well in their explorations, and given to them the best and first chance to become the owners of valuable mineral lands. Now, "Copper," with this brief exposé, do you not think that we are entitled to endeavour to secure British capital for the development of the copper mines of Lake Superior? We do not come from our remote region to impose upon the public. We say frankly and honestly to the European capitalists who are in search of good investments in mining properties and fair returns; to the English metallurgists, who are known for their skill and science in the preparation of minerals and smelting the metal; we say to them the Lake Superior country is open to all the men of

capital, science, and labour; let us give you all the true and exact information of our past, present, and future.

The copper mines of Lake Superior are not brought before the public to be represented with exaggeration. We acknowledge our faults, as well as our unsurpassed success, which ten years of experience has taught us. The extent of our territory and the wealth of our mines allow us to invite the scientific and practical mining men, also the capitalists of Europe, to visit and examine our mineral district; and those who will do so will be able, after a careful examination, to secure for a nominal price rich and valuable copper mines, iron mountains, and large tracts of agricultural and mineral lands, with water-power, for a few dollars an acre. We have not the audacity, like "Copper," to declare that the yield of copper in England is falling off, and that but for Lake Superior mines England will be left without a supply; on the contrary, we acknowledge with the rest of the world that England is the first productive country for copper, and is at the head of the mining interests; but we are right in anticipating good for the future, from our past yearly productions. We are young as adventurers of Lake Superior, but we are promising; and as the English capitalists and mining men are known to be pretty shrewd, and glad of good opportunities, I do not see why they should not carefully examine a new country, where the climate is salubrious, where mines of great promise can be bought at a cheap price, and where, if worked with sufficient capital, the economy, science, and skill which the English mining men are known all over the world to employ in their mining adventures would be remunerated with enormous profits. In the Lake Superior region, when you buy the mineral lands or locations, besides the subsoil you own also the surface land, with a rich and productive soil covered with heavy and good timber. You thus unite the double advantage of buying lands containing metallic veins and well adapted for successful farming, and also obtain on it a very abundant supply of wood for fuel and buildings, and suitable timber for mining; besides, the country is well watered with small streams of living springs of the best water, and branches of rivers, which afford excellent water-power, also numerous small lakes. The lands are dry and not swampy. There is a quantity of desirable land, suitable for settlers and large colonies, which can be bought at the Government price, \$1 25c. per acre. All our mines are of easy access to the Lake; and every facility and cheap prices are offered to ship the mineral to New York and Boston, or direct by the Welland Canal and the St. Lawrence to European ports.

SILVER VEIN MINING COMPANY.

SIR,—Many of your readers have been watching the proceedings of this company with great curiosity. It was formed about a year ago, with the object of extracting a larger amount of silver from the Cornish gossans than now done, and at a cheaper rate than the present methods. Parcels of ore containing silver have been frequently found in Cornwall and Devon in connection with copper, blende, antimony, and lead veins, and sold for high prices to the smelters. However, it is alleged that a process has been discovered by which the product in silver from any given bulk of mineral can be increased tenfold, and thus rendering such argentiferous minerals invaluable to their possessors. This company, instead of selling the ores, as done heretofore by miners, according to the contents by assay, submit them to the new process, by which it is said their yield in silver, bulk for bulk (not concentrated) is largely increased. Indeed, it is somewhat difficult to determine the limits to which the augmentation in silver can be carried, if what is stated be true. It is presumed, from the repeated representations made in the *Mining Journal*, that it is a bona fide experiment, and not such as those formed some time ago to extract gold from the rocks of Devon and Cornwall, or rather from the pockets of the too credulous public.

You state in your observations on the proceedings of the company, in the *Journal* of March 29, that a great amount of scepticism has been entertained in reference to this undertaking. Had the undertaking been confined to the working or purchasing minerals containing silver, and to extract the whole of the silver they actually contained without loss by a new process, there would have been no grounds for much scepticism, even should it prove in the end an unprofitable enterprise as a commercial speculation. But when the public are led to infer that Mr. Squire has discovered a process by which he has the power of increasing the silver in the raw material to any amount, I think men of the least reflection have reason to be more than doubtful.

In the last published accounts we are informed that blocks of 2 lbs., 3 lbs., up to 30 lbs. of prepared silver ore was to be operated upon, and that Mr. Squire says looks like bulk! These lumps may be called bulks in a laboratory; but in the practical treatment of silver ore bulks mean 10, 20, and 50 tons. Some time ago many tons of silver ore were sent from Cornwall to London to be operated upon by a similar augmenting process, and it was promised that the results should be published in the *Journal*, but they never appeared.

The directors of this company stated at the meeting held on March 19 that 10 tons would be successfully reduced in a few days, and that we should have the results. What were the results? I am sure that all well-wishers to legitimate enterprises would wish the company every success if their experimental proceedings are bona fide; and even should they be disappointed in augmenting the quantity of silver, or in obtaining profitable results, yet if they can establish a cheaper mode of reducing silver ore than the methods now in use in England and abroad they will effect a beneficial object.

SILVER VEIN MINING COMPANY.

[We think our correspondent has somewhat misunderstood the proposition laid down by the Silver Vein Company. They do not assert, we apprehend, that Mr. Squire has the power of increasing the quantity of silver actually contained in raw gossan, but that by all the methods hitherto adopted, where the silver exists in the form of an oxide, or, as we should suppose more probable, a sulphide, the greater proportion of the silver was lost, whereas by his process all, it is said, is retained. Again, with respect to the quantity operated on, the statement was that in each there were blocks of 2 lbs., 3 lbs., and 20 lbs. We understand that the gross quantity per furnace is about 1 ton weight of gossan.]

SILVER VEIN MINING COMPANY.

SIR,—Being prevented from attending the first general meeting of the shareholders of this company, I beg to thank you for the report which appeared in the *Journal*; and if you will kindly give the enclosed a place in your excellent paper, it will afford the directors an opportunity of explaining, through the same channel, what I fancy are discrepancies in the balance-sheet, as submitted to the meeting, and audited by Mr. Evans, public accountant, which was as follows:—

To share capital of 1500 shares of 1l. each	£1500 0 0
Less amount not called up, 15s. per share on 10,100 shares	5750 0 0 = £7425 0 0
Transfer fees	9 10 0
To creditors: Balance of purchase-money unpaid, due July 27, 1861	300 0 0
Expenses owing	45 17 4 = 345 17 4 = £7780 7 4
By purchase of mine, paid in shares	£3500 0 0
Ditto cash	1200 0 0
Owing	300 0 0 = £5000 0 0
Cost of reduction-works	393 9 3
Cash at bankers, London	117 4 7
Ditto, Bodmin	73 18 7 = 191 3 2
Preliminary expenses	780 0 0
Cost-sheets of mine and reduction-works	846 9 9
Office expenses, rent, salaries, &c.	431 17 0
Assays and petty cash	31 17 0
Law expenses	25 4 10
Travelling expenses	90 2 0 = 1445 14 11 = £7780 7 4

The above item of 1445 14s. 11d. is represented by, say, 800 tons of ore, valued at 5l. per ton, or 4000l., which, if realised at that amount, will leave a net profit of 2554l. 5s. 1d.

The share capital, as represented in the above balance-sheet, is 1500l.; less amount not called up, 15s. per share on 10,100 shares, showing that 5s. per share only was called up, would give 2525l., instead of 5750l. Then, 750l. for preliminary expenses appears to be very large, considering that 5000l. was paid for the mine before one shilling was expended for machinery, or any other raised. Office expenses, rent, salaries, &c., 432l. 1s. 4d. for one year, also appears tremendous. Travelling expenses, 90l. 2s. Then the sum of 1445 14s. 11d. is said to be represented by 800 tons of ore, valued at 5l. per ton, or 4000l., showing a net profit, when realised, of 2554l. 5s. 1d. And I would here enquire, whoever heard of keeping 800 tons of ore unsold on a mine?

According to my reading of the above balance-sheet, the accounts would stand as follows. But, as I would not say I am correct, in opposition to a statement of accounts produced by a "public accountant," I am sure the directors will be too glad to show if I am in error, as they appeared anxious to give every explanation at the meeting:—

To share capital of 1500 shares of 1l. each	£1500 0 0
Less amount called up, 5s. on 10,100 shares	2525 0 0
Transfer fees	9 10 0
Cash at bankers in London	117 4 7
Ditto at Bodmin	73 18 7 = £4225 13 2
By purchase of mine, paid in shares	£3500 0 0
Ditto, cash	1200 0 0
Owing	300 0 0
Cost of reduction-works	393 9 3
Cost-sheets of mine	846 9 9
Preliminary expenses	750 0 0
Office expenses, rent, salaries, &c.	432 1s. 4d.
Assays and petty cash	31 17 0
Law expenses	25 4 10
Travelling expenses	90 2 0 = £7589 4 2 = £3363 11 0

Showing a balance of 3363l. 11s. against the mine. The directors, I am sure, do not desire to take credit for the 4000l. worth of ore before it is realised.

MOUNT PLEASANT MINE (MOLD, FLINTSHIRE).

SIR,—I was exceedingly glad to see in last week's *Journal* the reply of the present manager (Mr. R. Williams) to the remarks of a "Shareholder" on this mine, in the previous number, and with your permission to occupy the space in your valuable *Journal*, will endeavour to lay a few of the facts before the public. There is not the slightest doubt regarding the capabilities and talent of the present manager, but I hope to be able to show that it is quite possible for even him to err. He (Mr. Williams) says that under the old management there was in the two years (1858 and 1859) 5120 tons of ore raised, valued at 18,153l., and dividends paid to the amount of 5440l. Now, the facts are that in the year 1859 the management was in the hands of the directors solely, there no dividend paid during that period; the above sum of 5440l. being paid as dividend in the year 1858, during which time I had the management. Again, previous to this, and notwithstanding the mine was labouring under very heavy expenses, such as sinking three new shafts, driving levels, and opening the mine in a workman-like manner, much larger dividends were paid.

It matters not to me whether the dividends of a mine appear "respectable and extraordinary" or not; but if they are not correct according to the returns realised, they undoubtedly ought to be so, not only for the benefit of the shareholders, but also for the credit of the parties concerned, as well as for the credit of legitimate mining; but whether the dividend of this mine for the last twelve months is "respectable" or not, at any rate it shows one "extraordinary" feature, as the following (Mr. Williams's own) figures will show:—

553 tons of ore	£7685 0 0
Deduct 100 tons of ore	£3840 0 0
" expenses dressing ore	88 5 0
" agency	158 0 0 = 4086 5 0

Leaving the very nice balance of £3598 15 0

What has become of the remaining not inconsiderable sum? Surely it should be accounted for.

With regard to the state in which Mr. Williams found the workings when he entered on the management I know not, as my term of office had ceased twelve months previ-

ously, the works for 1859 having been managed as before stated. Moreover, during the time I had the management I was overruled in all matters pertaining to my office by the directors, at the instigation of other parties, so that it was impossible to conduct the work properly. Again, when I retired the mine was not in a sufficiently advanced state to require "tram or wagon" roads, and therefore could not possibly be at that time in the "disreputable condition" out of which Mr. Williams boasts to have brought it. I may also state that in six months after I ceased to be manager nearly every run of ore was lost, and they were not raising more than paid current expenses, under which circumstances they were glad to avail themselves of my advice (and which I am in a position to prove by letters still in my possession), after giving which the persons before alluded to demurred to my mode of proceeding; whereupon I, at my own risk (being a shareholder), proceeded to drive in the direction I had pointed out, and having in one month driven a distance of 18 yards, cut a splendid run of ore, which continues to this day to be the main source of profit to this mine. The new shaft Mr. Williams speaks of was to reach this run of ore at a more convenient point. Has any other new discovery been made by the present manager?

In answer to Mr. Williams's assertion, that the shareholders are regularly furnished with copies of the reports and statements; I beg to say that I have only received one such report and statement; and also, that not only have several of the shareholders, but even one of the auditors, complained at not having received any such document. Why not forward them regularly to the Journal?—*Nerquis, April 3.* THOMAS DAVIES.

MINE INSPECTION.

SIR,—Those who may take upon themselves to defend Mr. Baker should not unworthily throw blame on his predecessors. Those residing amongst us who have watched the progress of mine inspection know well that Mr. Wynne, Mr. Longridge, and Mr. Brough were hard to effect improvements in machinery in South Staffordshire; on two occasions, indeed, the latter gentleman saved poor engineers when the coroner's jury had returned a verdict of "manslaughter." At Stafford Assizes he gave evidence, like Mr. Baker, that the machinery was in good working order, but he was honest enough to add that the principles involved were unsound; and though locally, by the provisions of the Act, the apparatus could be recognised, they were still insufficient for the means of safety. On this the judge (Baron Martin) ruled that there was no case against the prisoner, and he was accordingly discharged. Could not Mr. Baker have acted like him?—*Dudley, April 2.* JUSTICE.

THE "RELINQUISHMENT" OF SHARES BY VENDORS.

SIR,—Having been recently induced to invest some spare capital in one or two mining companies, I consider there is a process in the management of these concerns which should be protested against. When a new company is ushered into the commercial world, if the prospectus is skillfully expressed, there is not much difficulty in getting sufficient money to start the works and to carry them on for a few months. The shareholders are then led to imagine that all will run smoothly as a marriage bell. Very encouraging reports are habitually sent up by the manager, and the expectation of the shareholders, that the "great north lode" may be cut any day, and the mine thus become "a great success," is constantly kept up; so much so that, perhaps, some of them have bought their shares at a premium. By-and-by the engineer or manager reports that new adits must be driven, or a larger steam-engine erected to pump out the water and perform other operations. Then it is found that the paid-up capital is nearly exhausted, and that there are not sufficient funds in hand for these expenses, "absolutely necessary" to render the mine profitably productive.

New shareholders are started by another flattering report from the engineer, but accompanied by a quiet letter from the secretary, stating that, under these circumstances, the "vendors" have "generously relinquished" 300 or 500 shares, which they graciously offer at par to the existing shareholders.

Now, how is it that vendors can afford to give up shares in this manner, if directors consulted the interests of shareholders when purchasing such properties "on very advantageous terms"? Why should vendors give up shares when they have sold their interest? If the reason is to be found in the fact that vendors are also the directors, and thus make their own terms, then I think that when companies are supported by respectable names, and the public subscribe to them, believing that good faith will accompany the directors, and the interests of shareholders ought to be tamely submitted to the directors, and all appearance of jobbery should be vigilantly guarded against. When vendors "liberally relinquish" a large number of shares to raise money for the purposes of the mine, shareholders come to the conclusion that the vendors have received an excessive consideration for their rights, and are suspicious of the ultimate success of the concern, or of their chances of a fair dividend; their genuine paid-up capital being swamped by the nominal capital of vendors and promoters.

There have been no accounts whatever published as yet by one company, whose proceedings have occasioned these remarks, and the shareholders are in entire ignorance as to the price paid to the vendors, or the arrangement upon which the company has possession of the land. In fact, the system of promoting a company by directors who buy of themselves as vendors is wrong upon shareholders' brings mining investments into disrepute; and is not creditable to those otherwise highly respectable men whose names are considered guarantees for the good management of these undertakings.

SLATE IN CORNWALL.

SIR,—How is it that the slate deposits in the neighbourhood of the Delabole Slate Quarries, in this county (Cornwall), do not attract the attention of capitalists, when such quarries now working, no doubt, are worked at a considerable profit? There is always a large demand for slate of the Delabole character, which is in every respect equal to the Welsh slate; the demand is much larger than the supply. The present Delabole Company, comprising only a few wealthy men, year after year keep some hundreds of hands in constant employ, and yet cannot get their slate fast enough to supply their regular customers. What may be fairly inferred from this fact; that the works are unprofitable or profitable? Your readers can draw their own conclusions.

I cannot comprehend how it is that such a mass of valuable marketable stone as lies in the Delabole district should still, in the year 1861, lie buried and unprofitable, when hundreds of thousands of pounds are yearly thrown away in undertakings which do not hold out any prospect of success at all equal to working slate quarries in the locality mentioned, provided they are properly managed, as your correspondent in last week's *Journal* remarks. The private manner in which the Delabole Quarries are worked, and also the Bowthick Quarries, containing the same kind of slate, may be one reason why this class of investment is not much known; and possibly it is not a favourite property with shareholders.

There are grants which may be had of certain lands in this district where I know that good marketable slate can be raised within 6 ft. of the surface, and where there is every advantage for working on a large scale.—*April 3.* VIATOR.

WHEAL NELSON.

SIR,—Having seen in last week's *Journal* the report of a meeting of Wheal Nelson, where Mr. Peter Watson made statements respecting me contrary to the truth, I beg you will do me the justice to insert the following facts:—I am charged with misleading them from and since December, 1860. Now, the Messrs. Watson and shareholders know that Capt. George Odgers, of London, and I have been working the mine since December, 1860, and I have reported or expenses down to that date; and from July 25, 1860, Mr. Wm. Watson ordered everything wanted on the mine; he attended every monthly pay and setting, and reported to head-quarters all information respecting the underground settings and future prospects of the mine. And now, Mr. Editor, let me ask the proprietors what had I do with deceiving the committee of management or the shareholders?

In conclusion, I may, however, state that about the middle of 1860 Mr. Peter Watson, accompanied by his brother, Mr. Wm. Watson (our purser), visited Wheal Nelson. We had a small parcel of copper ore preparing for sale; they took away with them samples and had them assayed at Tavistock, and informed me by letter that it made a produce of 26 1/2 per cent. for copper. I corrected it, and it was never worth about 27 per cent; but, unfortunately, the parcel was sold at the next Cornish ticketing for 9l. per ton. Now, I would ask, in fairness to all, which of the two parties have most misled the shareholders?—*Camborne, April 2.* JOSEPH ANGOVE.

WEST WHEAL FRIENDSHIP—LEGITIMATE MINING.

SIR,—My attention has been drawn to the prospectus, which appeared in the *Journal* a few weeks since, of a limited company, who propose working the West Wheal Friendship Copper Mine. The working capital, it appears, has been fixed at 18,000l., 6000l. of which is to be paid for the property. The chief feature, it is stated, in this enterprise is that three lodes known to exist in this set will form a junction at a depth not much greater than the bottom of the present engine-shaft, which has already been sunk 53 fms. from surface. The point at which these lodes coalesce can be reached, it is said, in six months from the time of the erection of the engine, when "very productive returns may be confidently anticipated."

Now, Sir, I too happen to know something of the geology and physical geography of the West Wheal Friendship district, having myself been "raised" within cannon-shot of the West Wheal Friendship Copper Mine; and I have been thinking what a pity it is that the directors should allow so valuable an undertaking to go to the public, when they themselves can see the junction of the three lodes by an outlay of a thousand pounds. The mine has been sunk to its present depth with water-power; and a new water-wheel can be erected and the junction of the lodes seen without going to the expense of a steam-engine, and at a cost not exceeding 1000l. Let the directors see to this. The property, however, must have wonderfully increased in value, as not long ago the fee-simple of the estate on which the West Wheal Friendship stands might, I believe, have been purchased for less than is now required for the mine alone.

I have ever been an advocate for legitimate mining; and I do say that when such ponds as Ludcott, Mary Ann, and Trelawny, mines returning their tens of thousands of pounds worth of ore per annum, and paying thousands per annum in dividends, can be purchased for about the same amount which is asked for West Wheal Friendship; when Wheal Wrey is at this moment selling for 2000l., and the magnificent sett of Prosper United, with its two 70-in. cylinder steam-engines, can be had for little more than the sum now asked for West Wheal Friendship; looking at all this, I say that it is really astounding such an enormous amount should be named.

UNITED MEXICAN MINING ASSOCIATION.

SIR,—In your estimable *Journal* I see reference is made to a revival of the United Mexican Mine. Once more it attracts attention. No mine carried on by English money abroad has made or undone more fortunes, and so frequently. The last scandalous "rig" or report was about four or five years ago, and a more scandalous or unfounded one of rich veins and fine returns, &c., was never attempted. Shares went rapidly up to 9l. or 11l., as rapidly to go back to 4l. The present report, however, seems to have better foundation, and Mr. Fitzherbert boldly writes to the newspapers.

No mine is more lucky or unlucky; unlucky, for if it has sunk, if a farthing, perhaps from one to two millions sterling. This is the case with the United Mexican; outlay; at least the Editor of the *Mining Journal*, in an admirable work, published many years ago (and which should be reprinted as a useful direction to the public), puts down as "original capital" 10,000 shares at 40l. each, and 10,000 at 15l. each! Here we have half a million or more to begin with, besides loans, borrowings, &c., innumerable preference shares, &c., and may I ask, what return? Debts, indeed, have been paid, but little beyond. Ask old proprietors.

No mine has been more lucky in many of its directors. It counted at one period a Bonaparte, Stewart Majoribanks (of the great house of Coutts and Co.), Sir John Easthope, M.P., and others of high position. Some of these gentlemen quarrelled about a manager, and, probably, Mr. Stewart Majoribanks was right. It has been thought that Mr. Easthope was not very happy in his allusion, at the recent meeting in Finsbury, to mud "being mud" at the very moment when his successor, Mr. Fitzherbert, appears to have hit upon, or broken upon, good veins of silver. It was a damper, though, perhaps, not intended. Mr. Fitzherbert writes a letter (see *Journal*, March 23), in which he states that many difficulties are surmounted, and he pronounces the mine to be in a prosperous condition; he has also sent some remittance, or promises to do so. I trust he is right; and that debt which seems reduced from a heavy to a small sum will be redeemed, or shares given instead. I was no subscriber to it, and in my utter despair I would not subscribe, but regret that I did not, as it is but a slight affair after all. I

am content with my old shares, and hope and wish the undertaking or association may have luck at last to repay if only a part of a most fearful outlay. I wish it every success, and recommend shareholders to keep a sharp eye, and fairly, on both directors and managers, and to avail themselves of the new laws as regards mining generally in all parts of Mexico. ANOTHER UNLUCKY SHAREHOLDER, AN ORIGINAL PROPRIETOR.

April 4.

UNITED MEXICAN MINE.

SIR,—An "Original Shareholder," in last week's *Journal*, might have informed your readers, without any exaggeration, that the company possess a claim called the "Zacatecas claim" (\$70,000), an amount which is nearly equivalent, and a "set-off," to their loss of 17,000l., and its bonus of 25 per cent., which the shareholders, or such of them as advanced money out of their pockets, when all appeared hopeless, or next to it, are richly entitled to now that better times have come. They will soon be repaid if \$30,000 or more arrive by the first *conducta*, and the company has \$90,000 in ore on hand by the last estimate. I will not notice a claim of \$400,000, which exists as a first mortgage on the mine of Cata, for at present it pays nothing, nor does Rayas. The company have a claim of \$270,000 (and perhaps \$70,000 on Trinidad besides) on the mine of Jesus Maria et Josef, and it is from this mine solely that the rich returns are made. Let us justly calculate that this, at least, will be paid, and add it to the Zacatecas claim, of which \$130,000 has been paid off by the Government of Mexico, out of \$200,000, the amount of the compromise, and thus the proprietors have a total in good and substantial claims of \$340,000 (Trinidad not included) against the loss of 17,000l., and a bonus, or, say, about 65,000l., owed to her against, at most, 24,000l., principal and interest owing by her. These facts you may depend upon, and your readers, as well as the hitherto unfortunate shareholders, who for the last ten years nearly have not received a dollar from the mine. Perhaps the returns were *nil* for a time, as happens in the history of mines. I cannot go into this further. A CONSTANT READER.

April 2.

MR. SPARGO'S MINING "STATISTICS AND OBSERVATIONS."

SIR,—Last week's *Journal* contains an advertisement of the forthcoming work by Mr. Spargo, of Gresham House, entitled, "Statistics of, and Observations upon, the Mines of Cornwall and Devon," to be sold at 5s. per copy. I have also seen the previous volume, issued last year, on the same subject, which having been reviewed by numerous periodicals, has been very highly recommended; but the volume about to appear will, I am persuaded, be greatly superior to its predecessor, from the fact that the contents will be more full, varied, and interesting. At a considerable expense, Mr. Spargo engaged the services of a gentleman well known in Cornwall, from his connection with and knowledge of mines, to collect the statistical information, who has devoted much time to the subject, and procured an amount of information unprecedented and novel in its character. I happen to know this from an inspection of some of the returns sent to Mr. Spargo's office by the gentleman referred to, with whom I came in contact while on my journey through the mining districts. The work will be rendered very valuable to investors in mines, not only from the extensive information which it will furnish as to the results of the employment of capital in mining pursuits, but also from the several maps of the mining districts, and of the county of Cornwall, which will accompany the same. I question whether Mr. Spargo will be reimbursed by the sale of the work for all the money expended in its production; but he well deserves the patronage, and also the thanks, of miners for his services thereby given to the cause of mining, which is so important to the counties of Devon and Cornwall, and to the nation. MINE AGENT.

St. Austell, April 2.

Meetings of Mining Companies.

WICKLOW COPPER MINING COMPANY.

The ordinary half-yearly meeting of proprietors was held at the offices, Dame-street, Dublin, on Saturday, Mr. JOHN BARTON in the chair.

Mr. CHURCH (the secretary) read the advertisement convening the meeting, and also the following report of the directors:—

The directors have pleasure in calling the attention of the proprietors to Mr. Barnes's report, which, both as regards the operations of the half-year just passed and the future prospects of the mine, will bear favourable comparison with any they have yet had the gratification of submitting. It will be observed that the produce of copper pyrites (referred to in the directors' report of Sept., 1860, as improving) may now be considered of a permanent nature; that the new engine and engine-house have been completed, and the drawing by wagon direct from the bottom of the old line successfully established. As a considerable portion (nearly two-thirds) of the townland of Ballymurtagh remained unexplored for mineral; and as your directors believed that fresh operations upon this part of your property would meet with success, they proposed to the Hibernian Mine Company to sink a new shaft, and carry out the works necessary to explore this ground, provided they encouraged us to incur the expense of doing so, by agreeing to a reduced royalty upon any ores that might eventually be raised from said unexplored or new ground. The directors have great pleasure in announcing to the proprietors that the Hibernian Mine Company met their views in the most liberal manner, and at once agreed to reduce the royalty to 1-16th upon all such ores. Thereupon the sinking of the new shaft was immediately commenced; and as will be seen from Mr. Barnes's report, the indications are such as give every hope of success, and encourage your directors to believe the result will prove beneficial to the Hibernian Mine Company, as well as to the Wicklow Copper Mine Company. The accounts on this occasion show a larger quantity than usual of ore unshipped; but when it is borne in mind that we have gone through a half-year remarkable for its severity, which so greatly impeded the overground work, especially in the carriage and shipping, the surplus will not, under these circumstances, be thought excessive. It is gratifying to observe that, notwithstanding we had to suspend two of our principal shafts for nearly three months, whilst erecting the new engine (as is noticed in Mr. Barnes's report), the aggregate raisings have not diminished. It will be seen that there has been a gain on the estimate of the old outstanding smalls, and on the estimates of the March and Sept. half-years of 1860, amounting to 1136l. 16s. 4d., which, with the surplus of 1857, 9s. 8d. carried over from the last half-year, has enabled the directors to pay for the important addition to their plant of the new engine, engine-house, and steam-lighter, without any material reduction of the surplus fund. With reference to the resolution passed at the last meeting of the proprietors, namely—"That the present 5l. shares of the company be divided into five shares of 1l. each, and that the qualification for directors be 250 shares," the directors regret that, owing to unforeseen legal difficulty, they found that without dissolving the company, and obtaining the consent of every individual proprietor, it would be impossible to carry out the sub-division of the shares; and that was the entire cause of the delay in carrying out the resolution, they were in consequence obliged to abandon the attempt. The net profit for the half-year amounted to 15,104l. 15s. 10d.; of this sum 3 1/2 per cent., 377l. 12s. 5d. has been added to the indemnity fund against bad debts; and the directors recommend the meeting to declare a dividend of 2l. 12s. 6d. per share, free of income tax, to be paid on April 22 next, which will leave the sum of 1602l. 5s. 7d. to be added to the surplus fund. Messrs. John Barton and George McDowell, are the directors retiring by rotation, and now offer themselves for re-election.

The CHAIRMAN said there was very little indeed for him to comment on at that meeting. Although they had a few weeks of fine weather in February, which enabled them to ship 3000 tons of ore, still there was an accumulation in the Wicklow Mines of about 7000 tons. Connected with this large amount of ore to be delivered, he should refer to a large item in the account, but that was the entire estimate of what it would cost when the ore was put on board. The surplus fund included the new engine-house and steam-lighter. Another small defalcation had taken place, but it was of a minor character, and had been paid to the debit of deficiency. The disappointment expressed with regard to the sub-division of their shares had been mentioned in the report. There was an unforeseen difficulty in the way—the Board of Trade refused to allow it, and on consulting the very best authority they found it could not be carried out. There was a sum of money in jeopardy for ore delivered to a firm; but they had made new arrangements, by which they were able to get cash for their ore; everything delivered was paid for, and they were making 4000l. or 5000l. a-year by it.

A short conversation took place on this subject, after which the report and accounts were unanimously adopted. A dividend of 2l. 12s. 6d. per share was also declared. The outgoing directors were re-elected; and, on the motion of Mr. O'Brien, a vote of thanks was passed to the Chairman.

NERBUDDA COAL AND IRON COMPANY.

The first ordinary general meeting of proprietors was held at the company's offices, Broad-street Buildings, on Thursday.

Mr. HENRY HAYDEN (the Chairman of the company) presided.

Mr. H. HEATH (the secretary) having read the notice convening the meeting, submitted the report of the directors, and a statement of the receipts and expenditure (an abstract of which has already appeared in the *Mining Journal*).

The CHAIRMAN having moved the adoption of the report and accounts, said that he would detain them but a few minutes with any remarks with regard to the past operations of the company, or to what they, as directors, believed were its future prospects. That undertaking, shareholders would recollect, was started barely 12 months since, during which time they had succeeded in inducing Mr. John Howard Blackwell to accept the appointment of agent to the company in India. He knew that he was speaking of the opinion of every member of the board, as well as his own, when he stated that he believed they had secured the services of a very intelligent, active, and honest agent, and one perfectly *au fait* at his business, and that they had been more than ordinarily fortunate in their selection. Mr. Blackwell left England in November last, and arrived at the company's collieries on January 13. The tools and engines had been shipped, a great portion of which had, there was no doubt, arrived, although the board had yet no official information of the fact; but the first portion were due at Calcutta at the date of the last advice. The board had secured the services of two gentlemen as mining engineers, in the selection of whom they had been also very fortunate. Proprietors were ready aware that the directors had been in communication with the board of the Great Indian Peninsular Railway, with the view of inducing that company to construct a branch to connect the Nerbudda Collieries with the main line of the railway. There were no engineering difficulties in the way of construction, and they had every reason to believe that it would be commenced forthwith. As regards the issue of debentures, although the board were asking for the necessary power to issue them, it did not by any means follow that the power was about to be used; in fact, the board could not use that power until it had been sanctioned by a second special meeting. The board, looking as far as practicable into the future, were desirous of availing themselves of the best means to secure the most economical working of the company. Keeping that object in view, and supposing they should require more money—which he much doubted—a considerable outlay would be saved by the issue of debentures in raising fresh capital; and the original shareholders would ultimately get a very much larger dividend than 5 per cent., and, to a certain extent, free from any liability upon calls. Another question was the allowing shareholders to pay up in anticipation of calls. One of the most successful of modern companies was the Madras Irrigation Company, and one of the great reasons of that success arose from the fact that a very large number of the shareholders were allowed to pay up in anticipation of their calls. Having a guarantee from the Indian Government, the amounts that were paid did not result in any loss to the shareholders; but in the case of the Nerbudda it would be slightly different, for the company would there have to pay the shareholders 5 per cent.; therefore, the board thought the better plan was to ask for power to issue debentures, although they did not contemplate exercising that power for some time to come, if, indeed, at all. Another objection to shareholders paying up in full was the complicated

most satisfactorily, and he hoped that when he next had the pleasure of meeting the proprietors something more satisfactory than promises would be presented. He concluded by moving the adoption of the report and accounts.

Mr. S. L. FORTER seconded the resolution. Having been for many years connected with coal mining, he could testify to the fact that, considering the short time this company's work had been in operation the most satisfactory progress had been made; and he considered the prospects which it presented of the most encouraging character, and being of that opinion, he fully intended to increase his interest in the undertaking.

The resolution was then put, and carried unanimously.

The next resolution that was passed confirmed the contract between Mr. Blackwell and the company: when the qualification of the directors was increased to 100 shares. Special resolutions were then passed authorizing the board to issue debentures for a sum not exceeding 20,000*l.*, in sums of not less than 50*l.*, payable at the expiration of five years, and bearing an interest not exceeding 5 per cent. per annum, such debentures to be convertible into ordinary shares of the company at the nominal value of 20*l.* each, power being given to the directors to create new capital to meet the debentures.

It was agreed that the sum of twenty guineas should be given to the Indian Famine Fund, the board stating that they intended to increase that amount by their private subscriptions, and that they would be glad to receive any further subscriptions from any shareholder. A vote of thanks to the Chairman and directors was then passed, when the proceedings terminated.

DOLCOATH UNITED MINING COMPANY.

A special general meeting was held at the company's office, No. 32, Moorgate-street, yesterday.

Mr. JOHN CLIMAS (of Cambrone) in the chair.

Upwards of three-fourths of the mine was represented at the meeting.

Mr. BALCOMBE read the notice of meeting; the resignation of Mr. Fuller as secretary; the balance-sheet to date of such resignation exhibiting—

Balance last audit.....	£198 18 9
Subsequent expenditure.....	£ 88 0 0
Arrears of calls.....	105 0 0
Cash.....	5 18 3=£198 18 9

Resolutions were unanimously passed accepting the resignation of Mr. Fuller, appointing Mr. Balcombe secretary, and adopting the balance-sheet, subject to the audit of Messrs. CLIMAS and BALCOMBE.

Mr. BALCOMBE stated that the notice for the meeting will have conveyed to the shareholders the intention to submit a proposal for winding-up the existing cost-book company, with a view to the transference of the lease to a new company, to be formed under the Joint Stock Companies Acts. The desideratum of such transfer appeared to be unanimous, although he (Mr. Balcombe) believed some objection was to be raised to the sum to be credited for the lease—the amount proposed being deemed by the objectors inadequate to the great value of the set. So much unanimity, however, prevailed as to the great advantage of limited over unlimited companies, that the papers for the registration of the new company had already been signed by seven shareholders, and the admission of thirty-nine others were ready to be placed upon the books—in fact, nearly every share of the proposed company was taken, the title being "The Dolcoath United Company (Limited)." Mr. Balcombe, on behalf of the company as formed, was authorised to propose to purchase the lease of the mine, materials, and assets of the existing company for 1200 shares of 5*l.* each, credited 1*l.* per share, which will give three 5*l.* shares, 1*l.* paid, for each present unlimited share.

A lengthened discussion took place on the terms of this proposal, it being contended on the one side that the amount credited per share was more than equivalent to the sum actually paid on the present shares, and that the intrinsic value of an interest in the mine was in no way affected by the amount paid.

The CHAIRMAN said he knew the mine well; it was a set worthy of the most active development, and that although 100*l.* per share had been paid for the present shares, who could say it was too much, when it was known as a fact that within a quarter of a mile of the eastern boundary of the set the ground for 900 fathoms in length had yielded upwards of 9,000,000*l.* worth of ore?

Mr. FULLER argued that 2*l.* per share should be credited; that several of the shareholders who had purchased at high prices complained that they were to be only credited 1*l.*, while they were to be fixed to a certain liability of 4*l.* per share.

Mr. CHARLES POWELL said he thought it was a matter of no importance, and had nothing to do with the real value of the set and of the shares in the mine, while the extra capital was to be used for the development of the mine.

Mr. BALCOMBE explained, when Mr. BARRETT proposed—"That the offer made to this meeting by the representatives of the Dolcoath United Company (Limited) for the purchase of the lease, materials, and assets of the mine, by the issue of 1200 shares of 5*l.* each, in that company, each credited 1*l.* per share, be approved and accepted, and that the present cost-book company be, and that the same is hereby dissolved."—Seconded by Mr. MANDEN.

Mr. FULLER moved as an amendment—"That the same be accepted, provided 2*l.* per share was credited"—but this, for want of a second, fell to the ground, and the original motion was, with one dissent, carried.

Resolved, on the motion of Mr. BALCOMBE, seconded by Mr. FAUNTLEROY, "That the shares so to be received be appropriated to the existing adventurers on the cost-book, at the rate of three for each share."

On the motion of Mr. YARNOW, a complimentary vote was passed to the Chairman, who acknowledged it in suitable terms, and referred again to the point upon which so much discussion had taken place. He quite agreed with the explanations given and the point carried; and said he was satisfied, from an intimate acquaintance with the ground, living within a mile of the set—although not a mining captain—that the lodes from the celebrated Dolcoath Mine, which had been a dividend-paying mine for above a century (the present depth of which was 280 fms.) passed through this set and its neighbour, North Dolcoath. With active development he felt certain the shares would attain a great price.

THE GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND.

The ninth annual general court of proprietors was held at the London Tavern, on Wednesday, Sir JOHN HENRY PELL, Bart. (the Governor), in the chair.

Mr. C. FRENCH (the secretary) read the notice convening the court, and the minutes of the last were read and confirmed.

The CHAIRMAN said—Gentlemen, this is the ninth annual general court held since the company's resumption of business, and the operations which have to be reported upon today extend over the year ending Jan. 26 last. The printed abstract of the accounts for the period now under review has shown that there is a balance on the profit and loss account of 1490*l.* 15*s.* 9*d.* against the company. This unsatisfactory result is mainly owing to the overgrown competition in the iron and tin-plate trades, the unsettled condition of the Continent, the high rates of interest which have prevailed during the greater part of the year, and to the threatened disruption in the United States, all of which, in a greater or less degree, have affected the company prejudicially. Under these circumstances, the selling prices of iron have declined to a most serious extent, and that without any material change taking place in the cost of production. Labour, the chief element in cost, has maintained its price, and the trade generally has as yet done nothing to correct the anomaly. It has been the custom of this company to make no change in the rates of wages except in conjunction with other ironmasters; but upon this occasion it was found to be useless to wait for co-operation; and in September last notice was given to the workmen in the company's collieries and iron-works that a reduction at the rate of 10 per cent. would be made. The court of assistants hoped that the intelligence of the people would enable them to see that this step was both just and necessary, and that they would, therefore, cheerfully acquiesce in what was inevitable; but owing to evil counsels, or, more probably, to intimidation by that band of all honest and respectable workmen—a trade union, the terms offered were refused, and for nearly ten weeks the collieries and iron-works remained idle, with the usual painful consequences to the workmen and to their families, and not without ill effects upon the company. The latter, however, have been attended with mitigating circumstances, as the suspension of the works afforded an opportunity to remodel the establishment, and thereby to effect some economy in the future working. The suspension was a source of much mortification to the court of assistants, as it had ever been their constant desire and effort to uphold the interests of the workpeople as much as they could possibly do so with justice to the proprietors; and this feeling of consideration for the workmen was shared, too, by the manager of the works, as was evidenced not only by the absence on his part of retaliatory measures during the continuance of the strike, but also by his kind and humane efforts to relieve those whose sufferings were caused by the folly of others. The court of assistants considering this a fitting opportunity of expressing their full confidence in Mr. Struvé, who, the proprietors would remember, was appointed manager at Cwm Avon just before the last court, and whose ability and good judgment under the adverse circumstances with which he has had to contend since his accession to the office, have made a most favourable impression upon the minds of the court. The profit and loss account of the past year has been effected, not only by what has gone by, but also by a step which it has been deemed necessary to take in reference to the future. The depressed and unsettled state of trade has induced the court of assistants to make a large reduction in the nominal value of the stocks, with, of course, a corresponding effect upon the profits. The means used heretofore to secure a faithful representation of these stocks have been repeated, and the same care has been extended to all the other items in the account. The liabilities of the company, as it will have been seen, are still kept very low, and they are even smaller now than they were a year since, although at this time they include 25,000*l.* obtained from the bankers until the spring shipments of iron have taken place. This loan, which has supplied the place of the profits which in ordinary times have accrued, and being available, has to some extent occasioned the charge of 1410*l.* 15*s.* 9*d.* under the head of interest. Of the debts due to the company when the books were closed the greater portion has been paid, and the remainder are expected to run off in due course. The sum of 104*l.* 5*s.* 4*d.* is added to cover the loss by bad debts in the past year. The small sum set down for law charges settled all claims upon the company, and there is no reason to apprehend any increase of such expense. The works have been maintained in thorough efficiency, and in the past year 2777*l.* 14*s.* 6*d.*, of the cost of the previous improvements have been paid out of revenue. There has been expended 4373*l.* 14*s.* 1*d.* upon the works of a remunerative character. The balance at the debit of outlay on works' account now stands at 6155*l.* 14*s.* 1*d.*, and will be written off in this and the two succeeding years. Since last year the court of assistants have had to allot 1250*l.* in stock in settlement of a liability of the old company, and they have brought up and extinguished the sum of 145*l.* 14*s.* 9*d.*, in order to reduce the whole amount of this class of stock to exactly 900,000*l.* When the preference capital was being raised it was stated that this item might reach 350,000*l.*, but, as it has since been explained, it is not likely much to exceed its present amount. The plan proposed at the last annual court for the extinction of the debt then due upon the Cwm Avon church and schools was so far successful that it left the sum of 84*l.* 18*s.* 9*d.* only to be raised; this deficiency has been met by the members of the court of assistants. Although the court of assistants have not the gratification of presenting to you a balance-sheet which would justify the declaration of a dividend, they have this satisfaction—that they can assure you of the essentially sound and safe condition of the company, which they believe is better prepared than it has been at any previous period to meet the adverse times which it may yet have to pass through. They trust that such times may be of short duration, but long or short, it will be their endeavour so to conduct the affairs of the company that the full benefit may be reaped of any improvement in the company's trade, whenever such shall take place.

The SECRETARY then read the auditors' report, which stated that they had examined the books and accounts of the company at Cwm Avon and in London for the year ending Jan. 26. The cash payments were duly vouched, the quantity of stocks had been certified as carefully weighed and estimated, and the abstract of accounts, which had been printed and circulated, they had found accurately prepared from the books. The valuation of the various stocks, which had been made up by the court of assistants, appeared to them to be generally based upon the depressed state of the market at the time of stock-taking. There were a great reduction upon the valuations of last year, but even in the short space of time that had since elapsed the market for all descriptions of metal had been still further depressed. The position of the profit and loss account appeared to them entirely attributable to an extraordinary concurrence of adverse circumstances, which, it is well known, had seriously affected the metal trade during the year, and more or less depressed the prices of every article of the company's manufacture.

Mr. GAY (the deputy governor) then proposed that the Governor's speech and the auditors' report be entered upon the minutes.

Mr. GILBERTSON, seconded the proposition.

Mr. GILBERTSON, son (the father of the late manager), enquired whether the court of assistants were perfectly satisfied with the present manager at the works at Cwm Avon? He believed Mr. Struvé was a highly respectable gentleman, and he had heard that he was a mining engineer, and in that department was an exceedingly useful and proper man; but he had been told that he was not efficiently conversant with the several branches of the company's trade.

The CHAIRMAN replied that the court felt confident that in Mr. Struvé the company had in every respect a most efficient manager.

Mr. GILBERTSON, sen., said, if he understood the accounts, there was in the present balance-sheet a deficiency of something like 40,000*l.* as compared with last year.

Mr. HAWLEWOOD (a member of the court of assistants) explained that the difference did not arise from a decrease in the quantity of stock on hand, but from those stocks being valued at lower prices. Proprietors were well aware that it was beyond the power of the court of assistants to influence the market price of iron. As far, however, as the company's manufacture went, they were greatly improving their "make," and the company were really in a better position than they were this time last year. Proprietors must not run away with the idea they had lost 40,000*l.*, for they had done nothing of the kind. If, during the current year, the state of the market justified the court in increasing the valuation of stock of iron, copper, and tin-plates, proprietors would become large gainers without any further "make." With regard to the rate of 7*l.* per cent. if practically acquainted with every department in which the company were engaged, the hon. proprietor who had referred to that fact must remember that it was utterly impossible to find embodied in one single individual a practical copper smelter, a practical iron-maker, and a practical colliery manager, and, therefore, they must secure the services of the best man that could be found, and in Mr. Struvé, who was an experienced mining engineer, they had a thoroughly efficient manager. He (Mr. Hawlewood) would also remind the hon. proprietor that their last manager did not possess any practical capacity for any one department, being a lawyer, but still he discharged his duties most efficiently.

Mr. SAMUEL BAKER thought all questions of details, both as to how they were to be managed and by whom, were matters which should be left entirely to those to whom the company's affairs were entrusted, in whom he should be the most implicit confidence; but to his mind the most important question for them to consider was what was the best course to be adopted for the future—whether it would not be prudent to reduce for the present the expenses at the works by employing less people, and so forth.

The CHAIRMAN replied that there were certain standing charges which must be kept up, and, therefore, the more work that could be done the less were those charges upon the work accomplished. The great object of the court was to conduct the company's operations as cheaply as possible, and proprietors must not forget the present year was the first out of nine that they must have a dividend of 7*l.* per cent. if proprietors would only look back to the time when the company resumed operations, they would find that iron was then at as low a point in value as it had been for many years. If things would settle down in America there could be no doubt that the demand for iron would become very great, and the value proportionately increased.

Mr. BAKER enquired if the court contemplated a large expenditure upon improvements during the current year?—The CHAIRMAN replied they did not contemplate such extra expenses would exceed 400*l.* or 500*l.*

Mr. HAWLEWOOD reminded the proprietors that a large portion of the expenses already incurred was the means of creating a profit upon certain departments.

The CHAIRMAN, in answer to a question, said that the company were realising a small profit upon the work in which it was at present engaged.

Mr. A. BEATTIE (one of the auditors) bore testimony to the efficient manner in which the whole of the company's affairs were conducted by the present manager. As he (Mr. Beattie) was so fully acquainted with the company's details, he felt that it was but due to say that the court of assistants had made a most judicious selection, having appointed Mr. Struvé manager.

The resolution adopting the Governor's speech and the auditors' report, and ordering them to be entered upon the minutes, was then put, and carried unanimously.

A meeting of the court of assistants was then re-elected, and the auditors re-appointed. A vote of thanks to the Chairman and directors was then passed, when the proceedings terminated.

FOREIGN MINES.

COPIAPO.—Chico Mine: The winze sinking under the 30 fathom level, west of Price's shaft, is down 2 fathoms; we have gone this depth through attle, and I very much fear we shall be obliged to abandon it altogether, as we have water in the bottom, and the sides are exceedingly weak and heavy. We have driven a bar of iron nearly 3 fathoms down from the present bottom of the winze, but cannot meet with any whole ground, which shows that we have attle down near the back of the 40. The lode in the 40, west of Price's shaft, is at present small, and of little value. We have been for a long time expecting a bunch of ore in the end, but our expectations as yet have not been realised. It is evident that the level above was rich; the lode, too, was large. The lode in the rise in the back of the 40 west is much the same as when last reported on, but I am daily expecting attle here as well. The lode in the winze sinking under the 40 west is 2 feet wide, worth 1 ton of 17 per cent. ore per fathom. The lode in the steps in back of the 30 north is 2 feet wide, producing 12 per cent. ore. The lode in the chiflon sinking in the western end of the set is at present poor. We have commenced to sink a chiflon under the 10, in the western part of the mine; the lode at present is unproductive. This place was worked some time ago for silver, but at present it looks very kindly for copper; it is a question as to how far we shall be enabled to prosecute this part, as there is water to contend with—Price's Shaft: We have completed the work referred to in last report, and have resumed sinking; the lode is 2 feet wide, producing some stones of ore. On the whole, I am sorry to inform you the mine is exceedingly poor.—A. ANTHONY.

DULCINERA MINE.—In No. 1 chiflon south the lode is 2 ft. wide, not looking altogether so well as when last reported, and yielding about 1½ ton per fathom of 25 and 18 per cent. ore. The stopes are looking much the same as when last reported, producing from 1½ to 2 tons of 30 and 18 per cent. ore per fathom.—S. UREX.

NEW GRAND DUCHY OF BADEN.—J. Richards, April 1: At Schindler Mine engine-shaft, in the 34 north, now extended 8 fms. 2 ft., we are carrying 3 ft. of the lode, which is worth 10*l.* per fm.; it is easy for working, and we shall soon get the end sufficiently advanced for another pair of men to cut through and strip down the other part. The same level south is extended 5 fms. 4 ft. 6 in.; near the end the lode is cut into 2½ ft., which is worth at the rate of 22*l.* per fm., the inner part being chiefly quartz, spotted with lead, and rather hard for breaking. The country in the end, going by the side of the lode, is, however, easier than for some time past. The 44 north is extended 4 fms. 0 ft. 6 in.; we have now the western wall and 4 ft. of the lode in the end, which is composed of a large proportion of quartz and fluor-spar, with spots and strings of ore in almost every part of it, and looks very promising. The same level south is extended 2 fms. 1 ft. 3 in.; the end, carrying 4 ft. wide, is all lode, worth 15*l.* per fathom, and leaving more lode in the eastern side. We shall now commence rising in the back behind the end, where the branch and lode together is 6 ft. wide, with a fine appearance, and worth fully 15*l.* per fm. The stopes in back of this level is worth 8*l.* per fm. The stopes in back of this level, north of the shaft, are worth on the average 7*l.* per fathom. The 34 north is extended 65 fms. 2 ft. 9 in.; we have now about 15 in. of the lode in the end, which contains very good stones of ore; we shall this week commence cross-cutting the lode near the end. The same level south is extended 42 fms. 1 ft. 6 in.; the lode is 15 in. wide, worth 8*l.* per fm. The stopes in back of this level is worth 7*l.* per fm. At the smelting-works campaign 24 is finished; campaign 25, which will reduce January and February ore, will be commenced to-morrow.

EAST KONGSBERG.—Mr. Rordam, March 26: The find of silver in Sunde Mine is not yet rich, but better than last report; and experience tells us here that when a vein bears silver, as in this case, it almost invariably proves remunerative, and is sure to pay largely for working. The mine is well situated for mining operations, water being near and transport cheap. The existing shaft is well planned for economical working, being regular and sufficiently large. The mine is but a few fathoms deep. Mr. Sill, director for Kongsberg Silver Mines and inspector of the mines in south-eastern Norway, has been with me to-day visiting our mines. The southern vein in Ramsrud he tried in a level towards the west, and found it very favourable, having an appearance of giving silver shortly. I am glad to give you the result of the trial, and to send you the promised general report, and hope it will be approved; this report will contain the months of January, February, and March of this year. I have received the money from the bankers, and shall pay the workmen on the 30th. The accounts shall be sent next week. I send a plan of Anna Sophia adit and mine; you will see there that the mine is too large to think of covering in the whole opening. We must go on with covering one of the ends, I think in that part of the mine where the adit is ending. The opening between the two stolls, or adits, is now fully enlarged, and this week the workmen are going to clear out the last part of the stoll, marked A (about 15 fms. in length). At the point marked B a great quantity of timber has to be taken out, and this is done, I must immediately go on to prepare the stoll for a railway. It would be well if you could send us the rails from England to lay down the whole length of the adit, about 120 fms. I beg to inform you that I have ordered the timber for working the Anna Sophia; this will augment our expenses for April and May. We must also now build up houses for workmen; these will cost about 80*l.* English. I hope to have the directors' order for this immediately.

LUSTITANIAN.—Palnal Mine, March 25: Basto's Lode: The lode in Taylor's shaft, below the 50, has not been taken down since our last. The lode in the 50, east of Taylor's shaft, is 2 ft. wide, of quartz. In the 50, west of Taylor's shaft (in the cross-cut), we have gone through one branch about 4 in. wide, of flookan, but we think there is still one more. The lode in the 38, west of Taylor's shaft, is 4 ft. wide, worth 1½ ton per fathom.—Levels East and West of River Shaft: The lode in the 50, west of this shaft, is 2½ ft. wide, of quartz and muddle. The lode in the 38 east is 2 ft. wide, of flookan, quartz, and stones of copper ore. The lode in the 28 east is 3½ ft. wide, of quartz, muddle, and small stones of ore. The lode in the 18 is 3½ ft. wide, of quartz and lead, worth 1 ton per fathom. The lode in the 8 is 1 ft. wide, composed of flookan and quartz, with spots of lead. The lode in the adit, east of Pinto's shaft, is still unproductive. The lode in the adit, west of Perez whim-shaft, is split into branches, which are producing stones of ore. The lode in Nunez winze, below the adit, east of Perez whim-shaft, is 2½ ft. wide, of quartz and flookan. The lode in the stopes No. 1, in back of the 50, west of Ernesto's winze, is worth 2 tons per fathom. The lode in the stopes No. 2, in the bottom of the 28, east of Clondino's winze, is worth 1 ton per fathom. The lode in the stopes No. 3, in bottom of the 38, east of Henrique's winze, is worth 1 ton per fathom. The lode in the stopes No. 4, in bottom of the 28, west of Clondino's winze, is worth 1½ ton per fathom. The lode in the stopes No. 5, in back of the 38, east of Clondino's winze, is worth 1½ ton per fathom. The lode in the stopes No. 6, in back of the 38, east of Clondino's winze, is worth 1½ ton per fathom. The lode in the stopes No. 7, in the back of the 50, west of Taylor's engine-shaft, is worth 1 ton per fathom. The lode in the stopes No. 8, in back of the adit, west of Perez whim-shaft, is worth ½ ton per fathom. The lode in the stopes No. 9, in back of the 28, east of Fegurido's winze, is worth ½ ton per fathom.—Mill Lode: The lode in the 38, east of the caunter lode, is 2 ft. wide, worth 1½ ton per fathom. The lode in the 28, east of the Slide lode, is 1 ft. wide, of flookan and spots of lead. The lode in the 18, west from the caunter lode, is 1½ ft. wide, of quartz, flookan, and stones of ore. The lode in the 8, east of the junction of the 18, is 1½ ft. wide, of flookan and adit, worth 1 ton per fathom. The lode in the 18, east of the junction of the 18, is worth ½ ton per fathom. The lode in the stopes No. 11, in the back of the 18, east of Dea's winze, is worth ½ ton per fathom. The lode in the stopes No. 12, in the back of the 38, west of the caunter lode, is worth 1½ ton per fathom.—Caunter Lode: The lode in the 50, west from Taylor's engine-shaft, is 6 inches wide, of quartz, spotted with ore.—Great Caunter Lode: The lode in the 20, west of Oak engine-shaft, is 1 ft. wide, producing small stones of ore. The lode in the 20, east of Oak engine-shaft, is 4 ft. wide, composed of quartz and gneiss, spotted with lead. The lode in the stopes No. 13, in the back of the 20, west of Oak engine-shaft, is worth 1 ton per fathom.—Ponte Lode: The lode in the 18, driving west of the River winze, is 6 inches wide, of quartz.—Slide Lode: The lode in the 18, driving west from Mill lode, is 1½ ft. wide, of flookan and adit, worth 1 ton per fathom. The lode in the rise in back of this level, going up against Abel's winze, below the adit, is 3½ ft. wide, of flookan and quartz. The lode in the 20, west of Oak engine-shaft, is 1 ft. wide, and unproductive. The ground in the pit, at Oak engine-

shaft, in the 40, is of the same nature as it has been. In about 2½ fathoms driving this cross-cut south we hope to cut the House lode. The ground in the 50 cross-cut, south of River shaft, is hard, but the men are making fair progress. The ground in the level driving from the river to the 30-ft. wheel is hard, but we are getting on satisfactorily, and we hope in about ten days more to have the wheel-pit. Carvalhal Mine: The lode in the adit level, west of the River Calma, is 3 ft. wide, of quartz and muddle, impregnated with copper, but in a very small degree. The lode in the costean pit, on the eastern hill, is 3 ft. wide, of quartz. We are opening on another lode on the western side of the River Calma, which is about 2½ ft. wide, underlying north about 2 ft. per fathom, and its composition is quartz and stones of muddle; should this lode be found worthy of trial we shall have a back of nearly 40 fms. in driving an adit level 100 fms. on the course of the lode into the hill.

PONTGHAUD.—W. H. Rickard, April 2: Our dressing operations have been carried on with much vigour and perseverance, and the result is a good sampling for the past month—250 tons, dry weight.

MAHIQUITA.—Santa Ana Mine, Oct., Nov., and Dec.: Cost, \$31,584; returns, \$29,032.—Dec. 7: In the 100 fm. sink some stones have been met with, containing about an inch solid thickness of grey and red silver, indicative of a good lode in the 110 when driven a short distance further north.—Jan. 9: The new shaft now communicates with the 90, and they are now sinking below it: the ventilation of the mine is hereby much improved. The shaft is cut down full size, and secured to the depth of 41 fms. below adit. The skip-roads are now being fixed in it.—Jan. 14: Santa Ana is a rich and valuable property.—Marmato: Nov. and Dec. cost, \$16,885; returns, \$16,215.—Furima: Nov. and Dec. cost, \$1510; returns, \$1778.

UNITED MEXICAN.—Guanaxuato, Feb. 23: Jesus Maria y Jose: I have little to state since my despatch of the 16th inst. as regards the works in this mine. The fluctuations have been slight; merely that the frents of La Trinidad may be considered not quite so good, whilst that in the cross-cut of La Providencia is still better than before. The level of San Andres (considerably above the works of San Francisco, and to which it is hoped the body of good ore will extend) is going on actively, in favourable vein stuff. The level of San Rafael, at about an equal distance below, is also being driven forward as a work of exploration. The profit made in January was \$3797; but, as the value of a considerable portion of the ore extracted has not yet been realised, the profit will be about double that sum. In the last four weeks the sales of hacienda ore (that extracted by day miners) have produced \$23,334, the whole to the credit of the mine; and the buscones' sales have given \$9007, half on the mine account. These latter sales, it will be observed, are falling off, and it may probably be well to discontinue them as soon as we can further augment the hacienda sales. The extraction by day miners has been 8044 cargas in the four weeks, of which 3131 cargas have been received at the hacienda for reduction, and 2700 cargas sold. We are now taking the steps for gold at Dolores, and no doubt it will prove the most valuable yet produced. It is understood that a conductor will be dispatched from hence early in April, when I shall remit to England about \$30,000—it may be more.—La Trinidad: Two frents in the direction of Jesus Maria are being driven, but little ore has yet been found.

PACHUCA.—Capt. Paull, Feb. 22: At present we are securing the old shaft at San Luis, and opening the whim-road, which will be completed next week. We shall then commence clearing the shaft to bottom, which must be at least 60 varas deep, of which 43 varas are clear, according to old reports. The shaft is 80 varas deep, and a level driven towards the Viscaina lode. At Santa Elena we have driven during the three weeks of this month 8½ varas in San Juan level, and 9½ varas in the adit level; in both levels we have cut the south part of the Viscaina lode, and we are driving on the same east. The ground is favourable for driving, and after driving a few more varas we intend to cut through the lode to the north or footwall; the lode at present is composed of quartz tabones, with a great quantity of bronco (muddle), with pintas of metal. In San Juan level the lode is more settled than in the adit, as it is farther east and 20 varas deeper, and from its present appearance I am glad to say it has been gradually improving, and is now yielding very good saving work of grey copper ore. We have re-let 6 ft. to drive by two men, at \$72 per fm.—Adit Level South, on Sewell's Lode: In putting a stope over the back of this level, in the former part of the month, we obtained but a comparatively small quantity of copper ore, we, therefore, set the men to rise at \$64 per fm.; they rose 1 fm. 3 ft. 8 in., and the lode has improved, yielding very good saving work, with every appearance of a still further improvement—re-let to four men, to rise 6 ft., at \$68 per fm.—Campbell's Lode, Adit Level: We stopped in the back of this level 3 fms. 1 ft. of ground, and obtained about 30*l.* worth of copper ore. As we cannot advantageously work this during the present severe weather, in consequence of the cold and continually freezing air, we have suspended any further stoping until the spring is further advanced.—Hall's Lode: We stopped in the bottom of this level 3 fms. 5 ft. 4 in. of ground, and obtained about 3 tons of copper ore, worth from 75*l.* to 80*l.* from 4 in. Here we are also impeded by the severe weather, but as there appears to be some length of good grey ground in the bottom of this level which could be more easily worked in the backs, and as the lode going down is worth from ¼ to ¾ ton of ore per fm., we think it advisable to sink a winze to prove the lode and lay open the ground for stoping; we have, therefore, set 2 fms. to six men, to sink at \$70 per fathom.—Kent's Shaft: The men have nearly completed their contract of 10 fms.; the ground passed through during the month has been hard for sinking, but congenial for copper, several small branches having been met with, being chiefly the yellow sulphuret.—Dressing: In this department we still continue getting the ore stuff in readiness for washing in the spring.

WEST CANADA.—Capt. Plummer, Feb. 25: Hutton Copper Bay Mine: The lode in the level going west of the new shaft continues to be productive, and has a very favourable appearance; the lode in the level east is not quite so large and ore, but no doubt will improve as we advance. We are commencing to stop the new shaft on account of its being very dry, which prevents the men working there during this cold season, but we shall resume work again as soon as the weather gets warmer. Palmer's shaft is being sunk with the usual progress, and the lode holds good. The lode in the level going west of this is large, and very good, yielding from 4 to 5 tons to the fathom. To the east of this shaft the level and stopes are going on as usual, yielding an average quantity of ore. The stope in Bray's yields 3 tons, and the stope west of Jennings's 3 tons to the fathom also; each of those places are looking favourably.—Wellington Mine: The stopes throughout the mine are looking about as usual. The stopes east and west of Grenfell's shaft are yielding upon an average 2 tons per fathom. Crase's is poor. The lode in Hooper's shaft yields 2 tons per fm. The lode in Rowe's is large, and will yield 3 tons to the fathom. Owing to the division in the lode in Knight's shaft we have not been able to take down the principal part of it. But we anticipate as soon as we are able to do so that we shall find a good lode. We are making good progress in sinking the shaft, and we cannot observe any increase in the water. The stope west of Grenfell's shaft, on the Fire lode, yields 2½ tons per fathom; and the lode in the level to the west of this is much the same. The lode in the level west of Colling's shaft (Fire lode) is improving.

CLARENDON (Jamaica).—J. Martin, March 4: Stamford Hill Mine: The lode in the shaft sinking below the 82 is 3 ft. wide, consisting of priam, hill killas, and red clay; the men are making good progress in sinking. The lode in the 82, east of cross-cut, is about 4 feet wide, and worth about ½ ton of ore per fm.; I have put six men in this end, so as to push on the driving, to get to the cross-course, which is about 9 fms.; therefore, I have stopped the driving west for the present, and put the six men east, as stated above. The lode in the west end is 3 feet wide, and worth ½ ton of ore per fm. I shall resume the driving west, as soon as we get away some little; the lode is very kindly looking one, and likely present to make a great deal of ore in depth. The lode in the 70, west of shaft, is 4 ft. wide, composed of porphyry, clay, and sometimes stones of ore, but you will remember that this is not the same lode as we have at the 82, where we have the ore, the one at the 82 being further north. I have dialled the levels from the 46 to the 82, and shall lay it down on paper at once, when we shall see more about it. The ground in the cross-cut north-west at the 46, to cut the Charing Cross lode, is still better for driving. I have commenced to dress some of the ore for shipment to England. The pumps and machinery work well, and all other parts of the mine are going on favourably.

NERBUDDA COAL AND IRON.—The following intelligence has been received from the agents in India:—At No. 1 level I am in very good coal, of which I am raising about 1 ton daily, and pushing on the level at the rate of about 2 yards weekly. The pit is also going on slowly, and as soon as I receive the tools, &c., now due in cuts, I shall be in a position to propose a contract for coal to the railway company.

THE FUTURE OF COAL.—The British coal fields cover an area of 5400 square miles; but those of this country cover 196,600 square miles, in addition to which new fields of great extent are being constantly discovered. England feels no alarm at any prospect of her coal fields not holding out, and this country ought to be equally confident of her inexhaustible supply. The quantity mined in England has generally doubled every 25 years, but in this country, from 1839 to 1849, it doubled itself every five years, and it continues to grow at a far more rapid rate than it does in England. The whole annual consumption of the world is estimated at 100,000,000 tons. Now, we see that this vast quantity is constantly increasing. If it remained stationary at that figure, the Pennsylvania coal fields alone would honour the draft for 3174 years. Double it, and the great Appalachian field would meet the demand for 6937 years. Extend it to 400,000,000 tons annually, and the productive coal fields of North America alone would be able to supply the world for 10,000 years. It is a wonderful feature in the great coal deposits, that Providence has located the most abundant ones in the coldest countries, where fuel is most required. Even Spitzbergen contains her share. This does not prove, however, that coal does not exist abundantly in Central America, Asia, and Australia. The presumption is that the future explorations will uncover deposits in those countries equal to the necessities of their inhabitants. But geology has determined the great fact that the coal mines of the United States will be certain to hold out.—New York Tribune.

ARTIFICIAL PRODUCTION OF THE DIAMOND.—It is reported that true diamonds have been artificially produced in a chemist's laboratory. Most readers are aware that diamonds are simply carbon in its purest form; they differ from charcoal only in being crystallised. Many attempts have been made to produce them by artificial means; the attempt under notice was made by M. Rossi, of Toulon. He placed certain quantities of water, phosphorus, and bisulphide of carbon in a

Mining Correspondence.

BRITISH MINES.

ABERDOVEY.—A. Edie. The ground in the engine-shaft is still hard and difficult for sinking; it is now about 8 fms. under the 32. The south lode in the 32 is 4 ft. wide, producing $\frac{1}{2}$ ton of ore per fathom, and a very kindly lode. The stope in the back of this level, on the same lode, is producing about $\frac{1}{2}$ ton per fathom. The stope on the main lode, north of winze, at this level, is producing $\frac{1}{2}$ ton of ore per fathom; and that at the 22, on south lode, about $\frac{1}{2}$ ton per fathom. The surface operations are going on favourably.

ALFRED CONSOLS.—S. Uren, T. Hoaking, April 3: Nothing new in Davey's engine-shaft, sinking below the 150, or in the 150, driving east of said shaft, for the past week. The main lode in the 140, driving east of the above shaft, is 5 ft. wide—unproductive. This lode in the 130, driving east of said shaft, is 4 ft. wide, worth 71. per fm. This lode in the 120, driving east of the above shaft, is 2 feet wide, worth 41. per fm. The north branch, driving west of cross-cut at the 130, produces stones of ore, but not to value. Roberts's stope, in the back of the 140, is worth 127. per fm. Floyd's stope, in the back of the 130, is worth 151. per fm. Rodda's stope is worth 251. per fm. Richards's stope, on the north branch, is worth 151. per fathom. James's stope, in the back of the 120, is worth 127. per fm. No other change to notice since our last report.

BALLYVIRGIN.—D. T. Macdonald, March 28: The west cross-cut from Rathlooney shaft is now driven about 8 ft. The men cut into a rough this morning, which is letting out a good deal of water, highly charged with mineral. I had some of the stuff from the vein, and found it to contain copper, lead and munda; we hope to cut the lode in a few days. The arch of ground over the shaft at the 10 is yielding a considerable quantity of ore. We will take this arch down.—Dressing Department: We have dressed and put to pile 1 ton of first crop lead, $\frac{1}{2}$ ton of first crop copper, 6 tons of copper munda, 9 tons of plain munda, and prepared for the crusher 2 tons of lead ore.

BEDFORD CONSOLS.—Capt. Mitchell, April 4: In the middle adit level, on No. 1 south lode, the men are driving by the side of the lode; there has been nothing met with in the cross-cut south since last reported on, but as there is more water coming from the end I think it advisable to continue the cross-cut till next setting-day, and if no more lode is met with by that time it is probable we shall drive east on the lode discovered.

BEDFORD UNITED.—J. Phillips, April 3: The lode in the 115 west is 2 ft. wide, and worth 3 tons of ore per fm. We are driving by the side of the lode in the 103 west. Vandell's and Manuella's stopes in the back of this level are worth respectively 3 and 4 tons of ore per fm. Woolcock's stope in the back of the 90 west are worth 3 tons of ore per fathom. There is no alteration in the 88 east. The stopes in the back of this level are worth 2 tons of ore per fm. We weighed off at Morwellham, on Friday March 25, 260 tons 15 cwt., and sampled (computed) 300 tons.

BENEATHWOOD.—J. Lean, April 4: We have this morning cut the lode at the 40; where picked into, as far as seen, it looks very promising; we shall see more of it in a day or two, I will then give you particulars. The men are progressing favourably in clearing up and securing the 20 winze; when this is completed, and the 30 cleared, we shall set the back to stope either on tallow or tribute; no time will be lost in effecting it; we hope to do it by the end of the month. I have set two men to drive the 30 south on the lode, which is 18 in. wide, composed of quartz, mixed with munda, and a little lead. The other operations and the machinery are going on satisfactorily.

BRONFLOYD.—M. Barbary: Settings for April: The 17 to drive west of cross-cut, on No. 1 lode, by six men, to carry it 7 ft. high by 5 ft. wide, 4 fms., or the month, at 41. 15s. per fathom; the lode is of a very promising character, being composed of first quality gossan, prun, or mineral clay, copper, and lead ore, yielding of the latter about $\frac{1}{2}$ ton per fathom. Twelve men to stope in back of the 15, east and west of James's winze, on No. 4 lode, 12 fathoms or the month, at 70s. per fathom. Eight men to rise and stope the back of the deep adit, east of the engine-shaft, 8 fathoms or the month, at 80s. per fathom. The lode in both places yielding an average of 8 cwt. of ore per fm. The No. 2 engine-shaft is sinking by nine men, under former contract. They have put in the bearers and cistern, and fixed the standing-lift, and are now making good progress in sinking below. Surface and dressing operations as usual.

BRYNFELIN.—J. Evans, April 4: The following bargains will be commenced on Saturday:—Continue the adit level east towards the junction of lodes, in which driving a pipe of ore, No. 1, will be intersected. The engine-shaft will be sunk below the adit, on the main lode, and between pipes of copper ore Nos. 2 and 3. There are three places where ore can be raised immediately, independent of sinking the shaft on the main lode, and continuing the adit level. The new trial, mentioned by Capt. Roberts, from surface will be continued, there being good ore going down, worth 2 tons per fathom. A second new trial is now made at the surface on the junction of lodes; 2 tons of ore are raised by the men from a small piece of ground; the ore is of good quality.

BRYNFORD HALL.—T. Pierce, March 28: Hammersley Vein: We have a little improvement at the forebrest of the 70 yard level north-west, the vein being 13 in. wide, composed of spar, calamine, and lead ore, but we are looking for a better improvement.—Nedden's Stump: We have cut into a new run of vein below the vein the men have cut into before, and by its appearance it will pay well. In the 100 yard level, the Milwren vein, the forebrest continues very hard, and we are driving to follow the vein; there is spar mixed with ore about 2 in. wide lining the heading side of the vein. In the north cross-cut, from Page's shaft, we have no alteration.—Bostock's Vein: We have cut into two pipes in the rise from the 60 yard level, the appearance of which is very promising. We are progressing as fast as possible with the Gateway shaft, on Lloyd's. All other parts of the mine are without any alteration.

BRYNTEAL.—J. Roach, April 4: The lode in the 10 end is smaller than last reported, and is at present without ore to value, but we are daily expecting a favourable change. We are rising in the best of the ore above this level, and from the quantity of water issuing from the lode, we fully expect it will shortly improve in quality. We have commenced sinking a perpendicular shaft 200 fms. east of the present workings, from which it is intended to intersect the Bryntal and north lodes. This will be looked forward to with great interest; the shaft is situated in the centre of the eastern ground, and, as decided, about 200 fathoms from any other workings. The 25 cross-cut, towards north lode, is still in hard gossan.

BULLER AND BASSET.—G. Reynolds, April 4: The engine-shaft is now sunk to the 100 fm. level, and in a short time we hope to be able to set to drive a cross-cut south in that level to cut the south lode; the lode in the shaft is full 4 feet wide, and has a masterly appearance. In the 80 we are driving west by six men, and also driving east by four men, where the lode presents a promising appearance, and from the indications we hope daily to meet with a great improvement. I would also remark, that in depth the nature of the granite seems to be improving, which bids fair towards the features of the mine.

BULLER AND BERTHA.—T. Foot, April 2: The 45 east has been driven 8 fms.; the lode for this drive is accompanied by spar and munda, with occasional stones of ore, but in the end it is 2 ft. wide, composed of peach, munda, spar, kilaas, and stones of ore, and, according to the present appearances of this end these branches are coming together again; the end is letting out a large stream of water, and the indications are such that we may reasonably expect an improvement again very shortly. To stope the back of the 32, to six men, 6 fms., at 21. 10s. per cubic fm.; the lode in this stope is about 9 ft. wide, and will produce fully 1 ton per fm. The 22, to drive north, to two men, 1 fm., at 31.; the lode in this end is also looking very promising to be productive in a few fathoms more driving. The 22, to drive south, to four men, 3 fathoms, at 21. 10s. per fm.; this end, although at present unproductive, we are happy to say that the lode, and the strata in which it is embedded, are so much changed for the better, and looking so congenial for the production of lead, that we expect very shortly of the lode become productive, and would here observe that this end is now further south than any of our other workings, and may be considered as a trial level, which we intend to be pushed on in order to prove the lode beyond the channel of unsettled ground. We have now six men sinking the shaft (about 7 feet deeper), cutting bearer-holes, fixing bearer and cistern, &c., so as to get our new plunger-lift, to work as soon as possible, in order to push on the 42 north under the shoot of ore we passed through in the level above. Our tributers having one month more to finish their contract, they will go on as usual till the setting for May.

CASTLEWARD UNITED.—R. Tabb, March 25: The bottom of the engine-shaft is now in a hard bar of ground, which retards our sinking as fast as we could wish; the ground, however, continues highly mineralised. The largest branch of lead crossing the bottom of the shaft is about 1 in. wide. The branch of ore alluded to in my last report is the 10 end, west from engine-shaft, has improved; it is now from 1 in. to 3 in. wide, in lead; this being in new ground, I hope it will prove a valuable discovery. The winzemen have been engaged the greater part of last week putting in timber, &c. The lode in the bottom of the winze is producing very fine stones of lead. The prospects of the mine have much more improved during the last fortnight.

E. H. Blake, March 29: In pursuance of the arrangement made at the last meeting of the directors, Mr. Crampton, Mr. Green, and myself proceeded to Castleward Mine on March 26, and have great pleasure in congratulating to the shareholders on the improved prospects of the mine. There is a good pile of ore at the ground since my last visit, and all the workings at present are producing ore. I proceeded to examine the lode in detail underground, and have to report that in the end of the lode there is a good branch of ore, and the ground favourable, showing that our lead ground is not confined to the south-east drivings. The engine-shaft is now down 7 fms. from the 10, and continues to produce good strings of ore. I am glad to be able to report that the water from surface in the 10 fm. level south, has been in a great measure stanch since my last visit, and the only inconvenience now felt is at high-water spring tides from filtration around the mouth of the shaft, but which only lasts for one day, and will be easily stopped when the burrow is increased so as to form a dam. The winze in the 10 fm. level south is down 2 fms., and is intersected by several branches of ore, and is continuing to produce ore in depth, and I trust that by the time it is down to the 20 a valuable amount of lead ground will be opened ready for stopping, as the branches continue on both sides of the winze. The engine continues to work well, but additional steam-power is wanted at once, as the old boiler will not bear a pressure sufficient for present work. A supply of coals at the year round can be had at Port-a-ferry, and it would be advisable to make an arrangement at once.

R. Tabb, April 1: The engine-shaft has passed through the branches of lead alluded to in my former report; the ground in the bottom of the shaft is hard and spare for sinking. The breaking of the windbox by a blast of the rock has caused some days delay; we have put down a stronger one, and the men have resumed sinking. The lode in the winze sinking under the 10 is equally as good as when last reported on, producing fine stones of lead; the water is quick and troublesome. The lode in the 10 end west is about 1 ft. wide, composed of flookan, with a branch of lead about 2 in. wide; it appears to me that we are just on the top of a deposit of lead, which will be proved by a deeper level; this end was set on Saturday last to drive by four men, for one month, at 31. 10s. per fathom; the contractors to pay all costs and charges. It being advisable to have some additional pitwork on the mine, to enable us to push on with as little delay as possible, I therefore suggest that two strong windboxes and one working-pipe be cast forthwith, also to get some second-hand pumps from Newtownards; this will enable us to keep the winze drained by the aid of the engine, and after a communication is made from the shaft to the winze this pitwork will do for a 30 fm. level.

CEFN CWM BRWNO.—April 3: The lode at the 80, going east of Taylor's shaft, is 4 ft. wide, and producing 10 cwt. of lead ore per fm.; this level is being driven by six men. The lode in the winze sinking below the 68 fm. level, 40 fms. east of Taylor's shaft, is 5 ft. wide, yielding 1 ton of lead ore per fm.; this winze is now down 9 fms.

4 ft. below the 68, and is in a good course of sinking by six men. The lode in the 56, or deep adit level, going east of Taylor's shaft, is 2 ft. wide, composed of spar, blende, and clay-slate, with spots of lead ore, but nothing to value; this level is being pushed on by four men. The lode at the pitch over the 68 fm. level, 50 fms. east of Taylor's shaft, is 5 ft. wide, yielding 16 cwt. of ore per fm. The pitch over the 56 fm. level, 55 fms. east of Taylor's shaft, is yielding 10 cwt. of lead ore per fm.; the lode at the pitch over this level, 40 fms. east of shaft, is 3 ft. wide, producing 10 cwt. of ore per fm.; the pitch over the same level, 50 fms. west of shaft, is yielding 10 cwt. of ore per fm. The pitch over the 44 fm. level, 70 fms. west of Taylor's shaft, is producing 9 cwt. of ore per fm. The other pitches at the different levels throughout the mine are without any alteration to notice since my last report. The dressing and drawing are going on regular.

CORNUBIA.—W. H. Gray, April 2: The mine has really a business-like appearance. The main beam is fixed, cylinder in, and now screwing down, and condensing work fixing; slate on the roof of engine-house, walls whitewashing, and scaffolding being stripped. The pumps referred to in my last are fixed in the western shaft, foot-stand complete at the old shaft, and bobs, &c., fixing with every possible dispatch. I entertain no doubt of starting the engine early in May, and cutting the lode in the new shaft in four months afterwards; should it prove but moderately good at the intersection, we shall find our mine increased in value many thousands of pounds.

CROOKHAVEN.—H. Thomas, March 28: In handing you my report for the past week I beg to say that everything is going on well. The engine-shaft is resumed sinking through an able pair of men (twelve in number), and from the effective state of the machinery in every department I am confident we shall make good progress for the future. The 40 cross-cut, north of the engine-shaft, is also being pushed on with the greatest vigour, and from the nature of the ground I think good results will be realised. During the past week I have carefully examined the champion lode, west from the engine-shaft, and from the strong indications of this lode, 160 fathoms west of the present workings, I would advise a trial shaft to be sunk to test the qualities of this fine-looking lode; the probable cost would be about 500. or 600., and I believe if this is carried out a valuable property will be opened up.

April 1: I have chartered a vessel, and to-morrow we shall commence to put the ore on board. The vessel will leave this place for Swansea in the course of the week. I need not say what difficulty I have had in getting a craft, particularly at this season of the year; the vessel will carry 160 tons, and will load back with a full cargo of coals and timber, as no doubt the latter can be obtained much cheaper in Wales than any place within 30 miles of the mine: 15 or 20 tons of timber is now required on the mine for various purposes, particularly for the engine-shaft. In consequence of the great influx of water in the engine-shaft, I have put on additional men, so as to prevent any hindrance for the present, but to provide for the future I have ordered some pumps from Cork, to put in a lift from the 40 to the 50; by doing this the monthly cost will be considerably reduced. I expect in fortnight the level will be in working order. The men I am sure cannot do more to push on the shaft, consequently I feel it my duty to give them every encouragement for their exertions.

CUDDRA.—April 4: We have finished clearing out the 90, and shall now make preparations for sinking below that level. After further examining the copper lode, we find it very good in the bottom of the level, composed of black and grey copper ore, with beautiful white sandy quartz. The shaft will be sunk through this good lode, and in consequence of the ground being of that good character, we shall sink to the 100 in about two months, in which level we shall get much copper ore; this sinking will produce a quantity of good ore during the time we are sinking the shaft. The levels from the 66 to the 90 will produce from 40 to 50 tons of ore per month, worth from 51. to 61. per ton. We have sampled about 25 tons of copper ore, worth from 51. to 61. per ton. We are driving the 78 west by the 60, where we have a promising lode, producing some good copper ore, which is likely to do well in deeper levels.—Tin Department: We have cut through the lode in the 46, which 26 ft. wide, and producing saving work, worth about 1 1/2 of tin per 100 sacks; when this lode is laid open it will produce large quantities of work for the stamps, but with the facilities we have we shall be able to make it pay well. We are breaking large quantities of tinstuff at the 30, which will pay well with our machinery. At the 20 we are cutting out under the lode to enable us to take it down with ease and economy. At the 10 we are taking down the lode, which is producing large quantities of work for the stamps. This lode in the various levels being from 10 to 20 feet wide, we must produce great quantities of stuff for the stamps; and though the work is not of high produce, the lode being so large we shall be able to make it pay well; the returns of which, with the copper ore, I consider cannot fail to give us a great property when in proper order for working. The machinery is working well, the stamping-engine is being erected with all speed, and we expect the stamps will be put to work early in May.

CUMBERLAND BLACK LEAD.—J. Dixon, March 26: We are getting some very fine wad of larger size, 1 lb. to 2 lbs. in weight and upwards, of the finest quality. We have about 40 lbs. dressed, and above 2 cwt. undressed.

April 2: I have about 60 lbs. of very fine wad dressed, and shall have as much more by Saturday. This pipe of wad may continue to a great depth, and prove equally as productive as even the grand pipe.

CWM ERFIN.—April 2: The lode in the 45, going west of engine-shaft, is 2 yards wide, composed of clay-slate, branches of quartz, and spots of lead and copper disseminated throughout—a kindly lode. The lode in the same level, going east of boundary, is yielding a little dressing work. The lode in the stope over the back of this level, 35 fathoms east of cross-cut, yields 15 cwt. of lead ore per fathom. The stope in the back of the same level, 25 fathoms east of cross-cut, has improved; the lode yields on an average 1 ton of lead ore per fm. The 32 going east of boundary continues to open out good stoping ground; lode worth 1 ton per fathom. The lode in the stope over the back of this level, 90 fathoms east of cross-cut, is worth 15 cwt. of lead ore per fathom. The stope in the back of the same level, 75 fathoms east of cross-cut, yields on an average from 3/4 to 1 ton of lead ore per fathom. The stope in the back of the same level, 60 fathoms east of cross-cut, has fallen off in value; now yields 10 to 12 cwt. per fm. The 20 has continued to open out some good stoping ground since last report; lode yields 1 1/2 ton of ore per fm. The lode in the stope over the back of the 20 fm. level, 90 fms. east of cross-cut, yields 2 tons per fathom. The stope in the back of the same level, 30 fms. east of cross-cut, is worth 1 1/2 ton of ore per fathom, and show symptoms of further improvement.

DEVON AND CORNWALL UNITED.—T. Nelli, April 2: In the Midway level, driving west, the south lode is very promising, and worth from 3 to 4 tons of ore per fm., and as this appears to be going back west, and up in whole ground, I have placed a pair of men to intersect it further west. In the Midway level east the cross-cut driving has not yet intersected the north part of the lode. The stopes in the back of this level are worth 3 and 4 tons of ore per fathom. At William and Mary, in the 10, east of engine-shaft, the lode is very promising, producing 1 ton of ore per fathom, and in ground very easy for driving. The stope in the back of this level is worth from 2 to 3 tons of ore per fathom. Seeing the lode in the 10 so promising, we thought it advisable to drive east to the adit level, it being standing for over 50 years, long to the south of that previously driven on.

The lode in the end is 3 ft. wide, producing good stones of ore, and from its general character is promising for improvement. In the adit cross-cut, west of shaft, both north and south, there is no change to notice. In the 12, west of water-wheel shaft, the lode is improved, and producing good stones of ore, and no doubt as we extend westward but what we shall find the lode more productive.

DEVON GREAT WHEEL ELLEN.—W. Taylor, April 2: Operations at present consist of driving west in the adit level on the course of lode No. 1; the composition of the lode for 2 1/2 feet in width comprises gossan, quartz, prun, and munda, altogether of an improved character, and considering the strata in which the lode is embedded being clay-slate and siltan, the chances of success in the west of the mine being fairly developed in fact beyond doubt, and I would urge the importance of additional force being put on, when the chances of a discovery of minerals at an early period may be justly anticipated.

DEVON NEW COOPER.—F. Hawke, April 3: The prospects in the 58 fm. level, 20 fms. to the west of the engine-shaft, are sinking in appearance as stated in my last report. The end and east of the lode, maintaining its mineral character, and the progress being made is quite satisfactory. Having driven for 3 1/2 feet or more through a kindly mineralised lode in the 68, I would recommend that the six men now engaged at this point cutting into the lode should, in connection with the cutting, stope a portion of the ore part past through as well; we shall then be proving the continuance of the ore already laid open, and ascertain the dip of the productive ground, &c. It is also very important as the ore ground is being discovered to prove whether the declination of the ore is eastward or westward from the present workings.

DRAKE WALLS.—T. Gregory, April 4: The branches in the 102, east of Matthew's shaft, are producing tolerably good work for tin, with occasional stones of copper. In the 92 east the branches are producing good saving work. The branches in the 80 are producing good stones of tin, and promising for further improvement. We have communicated the 80, west of Bettley's shaft, to the 102, and the men are now engaged in taking down the lode, which is producing to the value of 31. per fm.; we shall shortly be in a position to set a stope in the back of this level. In the 70, west of Brenton's, the lode is 20 inches wide, producing tolerably good work for tin, with good stones of copper ore. In the 60, west of Brenton's, the branches are producing saving work. The north lode continues to produce good stones of ore, and the ground favourable for progress.

DULTA.—J. Martyn, April 2: We have had an agent from the West to inspect our mine, who, after a careful inspection, expressed himself much pleased with all he had seen. He recommended driving the south cross-cut, and to sink a whim-shaft near Butt's lode, which will ventilate the mine. We shall at once put up a new whim on this shaft, when we shall be enabled to pay cost, or the greater part of it. We have this morning cut into another large lode, but have not yet ascertained its value. Our engine is working well, and everything progressing favourably. I hope we shall have a good parcel of tin for sale very shortly.

DYFNWGM.—E. Davies, April 2: I have a continuation of the same favourable report as the late ones to send. All the lode in the 70 east has not been taken down, therefore we do not know what it contains at present. The stope in the back continues to yield 2 tons to the fm. The stope in the back of the 70 west is without any change. The stope in the side of the 60 east turns out some good ore stuff. The men are still engaged tramming out their stuff from the 50 east, which continues of the same good quality. The end of the 40 east has a good sized ore lode in driving, and looks kindly for further improvement, and is producing from 1 to 2 tons per fathom, changing from the one produce to the other every foot opened on. The stope in the back of the 40 east has maintained its improved character; the lode becomes more settled, and the ore more regular. We have let a new stope in conjunction with the latter. Our measurements for March and lettings for April have been completed; we had an abundance of miners offering themselves. The drawing and dressing have gone on well; we have pushed on these two departments as far as possible. We have never dressed our ore for so moderate a sum as in the past month. We have drawn, dressed, and sent away from mine 51 1/2 tons of good quality, and shall ship again by these dates.

EAST CARN BREA.—T. Glanville, April 3: South Lode: In the 26 west the lode is producing 6 tons of ore per fathom. In the 40, driving west of the cross-cut, the lode is producing 3 tons of ore per fathom. We have about 2 fms. to drive west to get under the winze sinking below the 26; therefore, we may reasonably expect a further improvement.—Middle Lode: In the 40 west the lode is producing 2 tons of ore per fathom. In the winze sinking below the 40, the lode is producing 3 tons of ore per fathom. In the 50 the lode is producing 1 ton of ore per fathom, and has every appearance of improving as we open it out. There is a large stream of water issuing from the lode which has nearly drained the 40.—P.S. The produce of the 46 tons sampled on March 27, is 11 1/2.

EAST GRENVILLE.—G. B. Odgers, March 30: The engine-shaft to sink below the 25, by twelve men, at 301. per fm.; the lode being 4 ft. wide, composed of quartz, gossan, and prun, and worth for tin 101. per fm.; during the last 6 ft. sinking we have had a good improvement for copper ore; there is now standing for 6 ft. high a good bunch of ore, worth if it should continue full 301. per fm.; it being embedded in a beautiful gossan; I think it looks very promising indeed. The 25 east, to four men, at 41. 10s. per fathom; lode at present being small, producing a little tin; from the appearance of the lode here-to-day, I think it will be found to increase in size very quickly. The 25 west, to four men, at 31. per fm.; lode being 2 1/2 ft. wide, of gossan, quartz, and tin, worth about 71. per fm. We think the tinstuff at the stamps will be found quite equal to our expectations, and seeing the character of the ore, with the beautiful gossan in which it is embedded, I do think the prospects here are of a high order for making a good mine.

EAST GUNNIS LAKE AND SOUTH BEDFORD.—J. Phillips, April 4: We are still driving by the side of the lode in the 36. The lode in the winze in bottom of the 36 is from 10 to 13 ft. wide, worth 8 tons of copper ore per fm. The stope in bottom of ditto is worth 5 tons of copper ore per fm.; the ground is easier in the 36 cross-cut south. We are driving by the side of the lode in the 24. The lode in the deep adit level east is 6 ft. wide, composed of munda, peach, and good stones of ore. The lode in Gard's shaft continues its size and character.

EAST ROSEWARNE.—J. James, March 30: We are pushing on the 55 cross-cut with all possible dispatch; the ground is much as usual, but we think it will improve as we approach the lode. No lode has been taken down in the rise over the 45 east during the week; it has the appearance of a good lode. The 45 west is not so good as last reported, but producing good stones of ore; we think this change is temporary, and that it will soon resume its former value. The stopes over this level are worth 151. per fm. In the 33 east the lode is small, producing a little ore, but not much to value. In the winze below this level the lode is worth about 91. per fm.

EAST TREFUSIS.—J. Pope, April 4: The 88 cross-cut is driven north of Smith's engine-shaft about 4 fms. 4 ft., but nothing interesting as yet worthy of notice. In the 24, east of cross-cut, on Trellawny's lode, the lode is 2 1/2 feet wide, composed of quartz, fluor-spar, gossan, and stones of ore, with a promising appearance. In Trellawny's flat-rod shaft, sinking below the 30 (from surface), the lode is 3 ft. wide, yielding stones of copper ore, quartz, and gossan.

EAST WHEAL RUSSELL.—J. Goldworthy, April 3: At Homersham's shaft the lode in the 110 east is 2 ft. wide, producing good stones of yellow copper ore. The lode in the 100 east, on the south part, will produce 1 ton of good ore per fm. The cross-cut north in the 100 has been continued north, where some rich stones of red oxide and green we have sampled the end and put to pile 1 ton of ore, a very kindly looking lode. The winze sinking in the bottom of the 88, on the north lode, is worth 301. per fm. The stope east and west of Oats's winze, in the bottom of the 88, are worth 301. per fm. The stope in the back of the 88, on the north part of the lode, is worth 251. per fm. The end driving west of Soper's cross-cut in the 88, on the north lode, is worth 201. per fm. The rise in the back of the 77, east of Northey's winze, is poor. The rise in the back of the 66 is producing good stones of ore—a kindly looking lode.

—J. Richards, April 4: Homersham's Shaft: In the 110 fathom level east the lode is 2 feet wide, and consists of capel, munda, quartz, and of good stones of ore. In the 100 fm. level east, on the south part of the lode, the lode is worth 1 ton of ore per fathom. In the 100 east the cross-cut is being extended further north, where a portion of the lode is still found to be standing, and from which some fine stones of red oxide and green carbonate of copper are being obtained. In the winze sinking below the 88 east, on the north part of the lode, the lode is worth 301. per fm. In the stope east and west of Oats's winze, below the 88 east, the lode is worth 301. per fm. In the 88 east, west of Soper's cross-cut, on the north part of the lode, the lode is worth 201. per fm. In the stope in back of the 88 east the lode is worth from 201. to 251. per fm. The lode in the rise in back of the 77 is unproductive. In the rise in back of the 66 east the lode yields good stones of ore.

EAST WHEAL TOLGUS.—April 3: Redruth Consols Lode: The lode in John's shaft sinking below the 67, is 16 in. wide, consisting of spar, munda, and good stones of copper ore, looking very promising for further improvement. In the 57 east the lode is 15 in. big, composed of spar, peach, munda, and good stones of copper ore, a very kindly looking lode. The lode in the winze sinking in the bottom of the 46 east is 15 in. wide, and consists of peach, munda, and spar, producing occasional stones of ore. In the 34 east the lode is 20 inches wide, composed of peach, munda, and spar, and is letting out more water than usual; it has a more open and kindly appearance than for some time past. The stope in back of the 34 west, and adjoining John's shaft, is worth for tin and copper ore 101. per fm. The stope in back of the 22 east is worth for tin and copper 101. per fm. The stope in bottom of the 22 east is worth for tin 121. per fm. No lode nor branch has been met with in the 46 cross-cut, north from John's shaft, since last reported.

EXMOUTH.—J. P. Nicholls, J. Nicholls, April 3: The 72 north is without alteration in value since last report. The stope in back of this level, two in number, are yielding about 1 1/2 ton of lead ore per fm. The ground in the 60 north rise is easier for progress, and is now up about 7 fms., lode pure. The 40 north being over this point, we have extended the end and put the men to sink to make a communication with the rise as soon as possible. The ground in the 40 sink is easier for progress, and very congenial for mineral, although the lode is unproductive of lead ore to value at present. The ground in the 10 south is easier for driving, and looks very kindly for an improvement; the end at present contains blende and lead, but not sufficient to value. No other alteration to notice in any other part of the mine since last report. All the machinery is in good working order.

FRANK MILLS.—J. P. Nicholls, April 3: The 84 north has improved since last reported; the end is now producing moderate saving work, and the lode showing strong signs of further improvement. The rise in back of the 72, and the winze sinking in the bottom of the 60, we expect to communicate by the latter part of this week, when we shall at once resume driving both levels. The 60 cross-cut east intersected a branch of the east lode about 15 in. wide, chiefly composed of barytes, with occasional stones of lead. We think the main part of the lode is still in advance of the end, which will be proved by continuing the end from 2 to 3 fms. further. The men are progressing satisfactorily towards fixing the stail in back of the 45, where the lode is 18 ft. wide, worth for the width 3 tons of lead ore per fm. The different stopes in back of the 60 and the 45 are without alteration since last reported. We have opened a winze pit, and commenced to sink a winze from the 72 to the 84, about 12 fms. in advance of the latter end, where the lode is worth 2 tons of lead per fm. There is no alteration to notice in any other part of the mine.

FURSDON.—J. Hampton, J. P. Daw, April 2: In the 21 we have driven south 3 fms., and cut through a branch of lode containing quartz and ore, varying in size from a few inches to 2 feet wide; the end will be continued a little further, at 45s. per fm., by two men. We have also set to drive west in this level on what we assume to be Margaret's lode by two men, at 50s. per fm. We have also set to drive east on a lode further north, by two men, at 35s. per fm.; the summen now command these operations. The 11 east is producing stones of ore. The 11 west is worth about 2 tons per fm., and although we have had richer ends for a short time, we never had one looking so healthy, the lode being so strong and compact; we have here met with a crossing, but it has not affected the lode, a portion of which is standing by the side of the level, and we have put the men to take it down. Barret's stopes are worth from 2 to 3 tons per fm.

GAREG.—W. Sandoe, April 3: In the 20, east of engine-shaft, the lode is from 2 ft. to 3 ft. wide, producing a little ore, and judging from the present appearance of the ground I expect a favourable change in this end shortly. The 20, going north from engine-shaft, towards the old lode, progresses very favourably, and with the present soft ground we shall soon reach the lode, and prove its value, &c. In the new shaft sinking below the 15 there is no change worthy of remark since my last report; the sinking, &c., is in regular progress.

GAWTON.—G. Rowe, March 30: All our operations are progressing in a satisfactory manner, and the different stopes are producing from 2 to 2 1/2 tons of ore per fathom. January and February ores weighed off yesterday, 41 tons 13 cwt. 2 qrs.

GERNICK.—C. Carkeek, April 4: Spencer's engine-shaft is now down 8 fms. below the 20; if the ground continues as favourable as hitherto we shall have the shaft complete to the 30 by the end of this month. The lode in the shaft, at the present time, is 3 ft. wide, of much the same character as for some time past—composed of a very soft quartz and prun, with large quantities of sulphurous munda, and occasionally good stones of copper ore—a very kindly lode. In the cross-cut north in the 20 we have intersected two branches about 3 ft. apart, composed principally of schori, and making a low produce of tin; we expect in cross-cutting about 5 ft. further to cut the north, or main branch, which produced large quantities of tin in the back of the 10.

GREAT CARADON.—F. C. Harpur, April 3: The ground in the 40 cross-cut, north of shaft, is much harder than it was when I last wrote you, carrying small veins in branches of spar, and letting out some water. In the south cross-cut, in the same level, the ground is also much harder than it has been, and letting out a large stream of water; in consequence of this we are now passing through a branch about 3 or 4 in. wide, composed of flookan and munda, bearing nearly east and west.

GREAT RETALLACK.—W. H. Reynolds, March 30: The lode is still looking pretty well at the 35 for blende, but harder than in the upper levels.

GREAT TREGUEN CONSOLS.—J. Spargo, April 4: The lode, or rather the branches which had been thrown off by the slide, are now rapidly approaching each other, and the lode in the 100 east is now forcing a wall at the north; the branches are full of the stuff defined, chiefly spotted with copper and munda, but the general composition is fluor-spar, quartz, and felspar, similar in nature to the rocks of ore that we have broken 4 fms. ahead in the level above, or rather in the bottom of the 70, where we were obliged to cease working by reason of influx of water, but which we are daily expecting to let down, when we shall immediately resume stoping. I have forwarded to London some of the stones broken from the deepest part of the sink in the 70; finer specimens cannot be seen in the county of Cornwall.

GREAT WEST SETON.—H. Cowling,

shall commence to clear west at once, when we shall soon be in a position to set more tribute pitches. It will take a month or two to clear the different levels, and bring the mine into a proper state of working, after which I have every reason to expect some good and regular returns will be made.

TRENCBOM.—R. Hollow, P. Bennett, April 3: At Giesler's engine-shaft, sinking below the 90, the lode is unproductive. In the 90, east of the engine-shaft, the lode is worth 21. per fm. In the 90, west of the engine-shaft, the lode is worth 12. per fm. In the 80, east of the engine-shaft, the lode is worth 41. per fm. In the 80, west of the engine-shaft, the lode is unproductive. In the 60, east of the engine-shaft, the lode is worth 41. per fm. In the 40, east of the engine-shaft, the lode is worth 41. per fm. In the 30, east of the engine-shaft, the lode is worth 21. per fm. In the 20, west of the engine-shaft, the lode is worth 31. per fm.

TREVOULE.—H. Stephens, J. Lean, April 4: All the points of operation in this mine are without change to notice since our last report. We are opening out a large extent of ore ground, which will enable us to increase our future samplings very much.

TREWEATHA.—J. Scoble, April 2: The engine-shaft is down 6 fms. 2 ft. below the 15; ground somewhat harder. In the 15 south we have met with another cross-course which is very soft, and of a very congenial character for the production of lead, but in consequence of its being so very wet and troublesome we have scarcely got far enough through it to report fully of its value. I can, therefore, only say that in the stuff washing back from beyond where we can get to see there is some beautiful lead, good work.

TRUMPET UNITED.—G. R. Odgers, March 30: We are making good progress with the sinking of the engine-shaft; our speed is about 6 ft. per week; the lode averaging 10 in. wide, and worth about 31. per fm. The lode now laying open in the western end of the shaft will work away at 1s. 8d. in 11. I am calculating by the latter end of next week to be at the 15, after which we shall open west, and commence stamping. All the other work is progressing satisfactorily.

TYRINGHAM CONSOLS.—C. Lobb, April 20: By your request I was through the adit to-day. The adit end is extended west of the whim-shaft 18 fathoms; the lode for the last 2½ fms. is disordered with the granite mixed in it; the lode altogether is 3 feet wide. I think as we get west the lode will make more regular; it is a very pretty looking lode all the distance from the shaft. I think this lode will make tin in depth. The engine-lode in the adit level is a beautiful looking lode for a great many fathoms in length; I think the sooner the engine is put to work the better. My opinion is that everything looks favourable about the ground for the lode making tin in depth. We are making slow progress in timbering the shaft; we calculate it will take three weeks that will be very long. In driving in the side tye we have 2½ feet of level more to bring in to drain the adit, I think; there are 12 tyes of timber to alter, and by doing so I think it will drain the adit very well. The lode that was cut in driving in the side tye I think ought to be extended west a few fathoms, to see what course might be taken when the mine is sunk to the 10. I think the lode shows every indication for making tin. I am very much pleased with the appearance of the mine all through the adit level.

VALE OF TOWY.—A. Waters, T. Harvey, April 2: Clay's engine-shaft, sinking below the 90, is progressing favourably. The east lode is now on the footwall of the shaft, and from its vertical position is, we think, in junction with the main lode, at present depth. We calculate on reaching the 100 by the end of next month. In the 90, driving south of said shaft, the hard ground continues, but the lode, which is yielding blende and occasional stones of lead ore, is opening, and has a more promising appearance than of late. In the 80, driving north of this shaft, the lode is 3 ft. wide, composed of barytes, carbonate of lime, and stones of lead ore, but not to value. In the 80, driving south of Field's shaft, the lode is 5 ft. wide, yielding sulphate of barytes, considerable quantities of blende, and stones of lead ore. We expect to cut a bunch of lead ore in this end shortly. In the winze sinking below the 70, south of the above end, the lode is 2½ ft. wide, yielding rich lead ore throughout, and improving in depth. In the 80, driving north of Bonville's shaft, the lode is 3 ft. wide, yielding saving work for lead ore. The stopes in the back of the said level, south of Woolcock's winze, are yielding about 15 cwt. of lead ore per fm. The winze sinking below the 70, south of Bonville's shaft, on the little cross-course, is in favourable ground. The tribute department is the same as last reported. P.S. We have been granted to clear the adit level in Major Mansell's shaft; and, near the end of the shaft, but it may prove to be the top part of a good course of ore, and which indeed it is very likely to be the case. Knappa's lode in the 30 is about 2½ ft. wide, but it is not yet free from the gossan, which being intermixed with lead ore makes me feel very confident that when we get under it the lode will prove a very profitably productive one. If we find the gossan continues so strong, we shall begin to sink the shaft for another lift, for which we are now ready.

WATERMOUTH GREAT SILVER-LEAD MINING COMPANY (Limited).—Mr. J. H. Hitchins, under date of April 2, writes: Newbury: We are now sinking Hitchins's engine-shaft below the 30 with all possible force and dispatch, being already about 6 ft. below the collar, and the ground will admit of very satisfactory progress in sinking the shaft, which is of great importance to us. If we do not get at the present level (the 30) a real good course of silver-lead ore, depend upon it at the next deeper level (say the 30) we shall do so, to reach which in the quickest time possible we are doing all that can be done. In addition to the sinking of the engine-shaft (Hitchins's), we shall also be trying the lode deeper by the sinking of a winze in the bottom of the 20. At the point where we intend sinking the winze we have a very promising lode to begin upon. We shall also have capital good stones of ore to break the first moment that we begin the winze, and it is not at all improbable that it may prove to be the top part of a good course of ore, and which indeed it is very likely to be the case. Knappa's lode in the 30 is about 2½ ft. wide, but it is not yet free from the gossan, which being intermixed with lead ore makes me feel very confident that when we get under it the lode will prove a very profitably productive one. If we find the gossan continues so strong, we shall begin to sink the shaft for another lift, for which we are now ready.

WENTNOR.—T. Price (Bryndford Hall), April 4: The forebrest of the 64 yard level west is somewhat disordered. On Wednesday we found another vein coming in from the eastern side of the level, which, from its slight angle, appears to be nearly a parallel lode. We may expect that this will greatly improve the main lode when a junction of the two takes place. In reply to your letter, I also am disappointed that we have not had ore in good quantity for some time past in this level. I have never seen more promising ground in my life; and if we do not soon have good ore it will be one of the strangest things I ever met with. The vein is strong, and promises well.

WEST BASSET.—W. Roberts, April 2: In the 114 west the lode is 3 ft. wide, letting out water freely, and producing good stones of good ore. The rise in the back of the 104 is nearly holed to the 94, which will open good tribute ground. In the 94 west the lode is 3 ft. wide, producing 1 ton of ore per fm. The 84 west is nearly communicated with the 84 east from Hosking's winze; at present both ends are unproductive, each being in ground disordered by the cross-course. In the 65 west the lode is 2 ft. wide—tribute ground. The 52 west is looking better than it has been for some time past; the lode in the end is now 3 ft. wide, with stones of good ore.

WEST CONDUROW.—G. Bennett, G. Jewell, April 4: The lode in the engine-shaft is 3 feet wide, and producing saving work for tin, and impregnated with copper ore; the shaft is now down to the 12; we have commenced dividing down the shaft, and putting in the ladder and skip road, this we hope to complete this week. In the 24, west of Purser's shaft, the lode is from 2 to 3 feet wide, and impregnated with copper ore. In the same level east the lode is 4 feet wide, containing mundaic and spots of copper ore. We are sinking a winze under the 12 east of Purser's shaft, where the lode is 3 feet wide, worth 81. per fm. for tin, and of a very promising appearance. P.S. The 12, east of Purser's shaft, is worth 181. per fm.; we have some fine stones of ore broken since the afternoon. A. E. PAUL.

WEST GREAT WORK.—J. Prince, S. J. Reed, March 25: We beg to confirm our report of the 19th ult., and published in the Journal on March 23. We have driven east in the level on Acre lode through the cross-course. The western end has also been driven through the cross-course, when we found the lode was divided, and have to the right; a cross-cut was consequently driven in that direction 2 fms., when the counter-part of the lode was discovered, and we have since driven about 5 ft. west on its course; and although it is not out of the influence of the cross-course, yet the lode, which is about 1 foot wide is very promising, and daily improving, and it is at present worth 71. per fm., price for driving 41. per fm. The lode in the eastern end is about 15 inches wide, tinny throughout. On the footwall is a small vein of flookan (chloritic clay) which contains one-third part tin. This is a good indication, and whilst it continues to traverse the wall there is no fear of the lode continuing good. The remaining part of the lode consists of quartz and chlorite, containing tin, which, from the samples that we have assayed, makes the lode worth 251. to 301. per fm.; price for driving, 51. per fm. This is a most important discovery, and cannot fail to considerably enhance the value of the property; indeed, should both ends continue to improve as they have done during the last few days (and they look well for it), the mine will shortly pay its own cost. The Meadow lode in the east end is 2½ feet wide, containing mostly of quartz, containing a small quantity of tin, but not enough of it to give the lode any value. There is much water issuing from the end, and the indications on the whole are good. We will persevere from the foregoing remarks that the prospects in this part of our property are good, which is a fact, and although we did not get into ore ground so soon as we anticipated, yet the opinion given you at the last meeting respecting this part of the set has proved to be quite correct, and we still believe that by a further development good results will be obtained. The large quantity of timber required to support the three shafts, the erection of the whim-kibbles, pulleys, chains, &c., have made the cost heavy, but as these things will not be required again for the future will be reduced very considerably. We have raised about 177. worth of tin.

WEST SHARP TOR.—W. Richards, April 1: We have cut into the ore part of the lode in the 180 cross-cut about 2½ ft., and shall push this point forward with all force for proof of the remainder part of the lode; it is possible a better part may be found in advance of us. Morris's engine-shaft will be sunk to the next level with all possible good effect, where we may reasonably anticipate a course of ore, from the fine indications in the 150 already laid open.

WEST SNAILBEACH.—J. Richards, April 4: Our operations are at present confined to the sinking of the engine-shaft below the 64, and is now down 2 fms. 4 feet below the level; for the above distance we have had to sink through the north lode, which has been large and very troublesome for going through, and has been the means of impeding our progress. It is the intention to sink the present shaft to the 76, which will occupy about four or five months from this time, unless the ground should become more favourable. At the 67 it is expected that the junction of the north and south lodes will take place, and, judging from the nature and character of these lodes at our present bottom, a good course of ore is reasonably expected; there shall be no time lost on my part in order to arrive at the 67. The north lode, west of the engine-shaft, at the 64, is extended several fathoms from the shaft; and for all the driving the lode has had a very good appearance, producing ore for all the way, particularly towards the bottom of the level; at the present forebrest the lode is not so large, and the ground harder for progress. I am of opinion that we are approaching very near the junction of the south lode. The driving of the south lode east is extended from the cross-cut about 12 fms. By examining the 40 fathom level I find we have still a few fathoms more to drive previous to arriving at the ore-bearing ground gone down in the 40 fathom level; as soon as this is met with we shall have a long and high piece of ground to stop away in this level. The six men recently put to drive to cut the north lode, east of the engine-shaft, are making good progress; as soon as this is intersected we shall drive east on its course; by so doing we shall avoid ourselves of meeting with all the pipes or shoots of ore dipping in that direction. I firmly believe that with a little more time and patience the storm will be over, and brighter prospects in view.

WEST TOLCARENE.—R. Pryor, Jun., J. Brown, F. Pryor, April 3: The pump-shaft will be down 10 fms. by our next setting, and as the lode is again presenting better appearances, I have decided in sinking to the 12 before we drive; on reaching this point we have a right, from present appearances, to expect such change as will enable us to open up some good ore ground, and not time will be lost in carrying it out. We are still cross-cutting south to cut a lode.

WEST TREVELYAN.—G. R. Odgers, J. D. Osborn, March 28: Cater's engine-shaft to sink below the 48, by nine men, at 141. per fm.; the shaft is 9 fms. 4 ft. below the level, and we calculate it will take another week to sink it to the 58, after which it will be divided and cased, when we shall extend east and west as rapidly as possible. The 48 to drive west, by four men, at 41. per fm.; lode in the end being all of 2 ft. wide, composed of quartz and ore, worth 101. per fm.; here we have driven better than 12 fms. a good course of quartz and ore, and we think, judging from the appearances of the end to-day, that it is looking promising for a still greater improvement. The stopes in the 48, west, to eight men, at 21. 15s. per fm.; lode worth from 101. to 121. per fm. At the 38 we have set a winze to sink immediately under the 48 west, to six men, at 21. 15s. per fm.; this will ventilate the 48, and at the same time we expect to lay open a good piece of ore.

ground. A cross-cut to drive north at the 28, by four men, at 51. per fm.; the ground being of an easy kilias.—Park Shaft: We have set the cross-cut to drive south, by four men, at 41. per fm.; here we calculate we have nearly 20 fms. to drive before we cut the lode again; we expect in about 12 days commencing to intersect the lode, or old men's workings. There is no change in the water-wheel shaft or 10 fm. level east.

WEST WENDRON CONSOLS.—R. Kendall, April 1: The engine-shaft has been sunk in the past week about 6 ft.; 4 ft. south of this shaft we find the lode is all taken away by the old men; we expect in about 12 days commencing to intersect the lode, or old men's workings. There is no change in the water-wheel shaft or 10 fm. level east.

WEST WHEEL MARGARET.—Capt. Uren and White, April 2: The ground in Hallett's shaft, below the 20, continues favourable for sinking, and the lode much the same as last week, worth 71. per fm. The lode in the 20, east and west of Hallett's shaft, is producing unstuff of low quality, but at present not much to value. No change in any other part of the mine.

WEST WHEEL TOLGUS.—April 3: In our last report we stated that we had dropped the lift 12 fms. below the 50; the lift forced its way through old timber and rubbish for 9 feet. On draining the water we found the shaft to be choked full of timber and rubbish for 9 ft. above the bottom of the lift. We have since fixed the skip-road from the 50 fm. level 11 fms. below, and are clearing up the shaft with the skip instead of tackle; we hope shortly to get to the bottom level. Taylor's shaftmen are progressing favourably in sinking; the water is decreasing at the shaft. We have very good ground in the 10 fm. level of the 40, and the men will rise 6 fms. this month. The lode at Taylor's shaft, and in the present end there are several small branches, each containing good yellow ore; the appearance of the end leads us to believe that a lode is not far distant.

—Wm. Roberts, April 3: Since I wrote the report yesterday the men sinking the winze under the 70 have taken down the lode, from which they have sent up four skips of ore; it is 1½ ft. wide, and from its present appearance will produce 1½ or 2 tons of ore per fathom.

WHEEL ACAR.—Wm. Roberts, April 2: In the 80, driving west, the lode is 4 ft. wide, producing 1 ton of ore per fm. The winze sinking under the 70 produces stones of ore; the lode is 2 ft. wide. In the 70 east the lode is 3 ft. wide, with stones of good ore. In the 60 cross-cut, north from Windstar engine-shaft, the ground is favourable for driving, and in the present end there are several small branches, each containing good yellow ore; the appearance of the end leads us to believe that a lode is not far distant.

—Wm. Roberts, April 3: Since I wrote the report yesterday the men sinking the winze under the 70 have taken down the lode, from which they have sent up four skips of ore; it is 1½ ft. wide, and from its present appearance will produce 1½ or 2 tons of ore per fathom.

WHEEL ANNE.—H. B. Grosse, April 4: Having opened sufficiently on the backs of the lodes in this set to prove their value, size, and bearing, which we find to be satisfactory, we have commenced to drive the shallow adit, which will come into the great lode 10 fms. deep; set to four men, at 51. per fathom; the ground being a decomposed granite, such as the productive tin lodes are found in this district; and from the appearance of the lodes opened on to the depth of 10 or 12 ft., I have every reason to believe that we have a valuable property before us, if pumping machinery were erected; but when we take into consideration the advantage of working the property by means of the adit, and the cost of the cross-course, to six men, at 31. 10s. per fm., 4 fms. stent; the lode is 3 ft. wide, composed of spar, mundaic, peach, and some very good stones of copper ore.—Great South Lode: We have resumed a rise in the back of the adit, west on this lode, the lode is 1 ft. wide, yielding a little copper ore, but not enough to value; this rise is set to four men, at 51. per fm.—Watson's Lode: We have resumed driving the adit level, west on this lode, by six men, at 71. 10s. per fm.; the lode is 3 ft. wide, composed of spar, capel, and peach, intermixed with tin. The lode in the back of the adit west is 2 feet wide, yielding moderate stamps work for tin, and stopping by four men, at 21. per fm. We have set a pitch in back of the adit west, on north lode to two men, at 13s. 4d. in 11. All our operations are in and above the adit level.

WHEEL CREBOR.—J. Gifford, April 2: No alteration in any part of the mine to report on since my last. The different operations are being pushed on with all possible speed. The machinery and pumpwork are in efficient and effective condition.

WHEEL CUPID.—R. Pryor, March 30: The lode in the 65, east of the engine-shaft is 2½ ft. wide, producing stones of black and grey copper ore, and from its present appearance a further improvement may be shortly expected. Not much has been done during the past week. The men have been engaged in putting up a rise in the back of this level for ventilation, where the lode is 3 ft. wide, yielding some good copper ore. The lode in the 41 is 2½ ft. wide, and worth ½ ton of good ore per fm., with a good appearance. No change to notice in any other part of the mine since my last report.

WHEEL DAMSEL.—R. Pryor, H. Harvey, March 28: We beg to inform you that the water is in fork about 6 ft. under the 50 at John's shaft; there is a cross-cut in this level which is driven south 30 fms., and intersected the main lode; and on this lode we can get about 30 fms. west and 20 fms. east from this cross-cut, at which points there are some old stulls broken down, and filled the level.—Fox's Shaft: We find this shaft full from the 40 to the 50, where we have six men engaged clearing the same, and hope to have it completed to the 50 in about three weeks. We may here remark that the footway is completed through the winzes near this shaft to the 50, and succeeded in going east about 40 fms., where we find a cross-cut driven north on Hodar's shaft 40 fms., where there is a dam built with brick and cement; this is the dam that was put in when the north lode was cut, and could not keep the water. We shall be able to open this dam when the plunger-lift is fixed in the 50, at John's shaft, which shall be pushed on with all possible speed.—King's Shaft: This shaft will be completed to the 30 during the ensuing week, when we shall at once commence to timber and clear the same to the 40, at which point we shall put out a cross-cut south to explore the north lodes.—Tremayne Shaft: We are pushing on the different levels at this shaft with all possible dispatch.

WHEEL EDWARD.—M. H. East, March 30: South Lode: In the 92 west the ground is moderate for progress, and the same remark applies to the 81 west. In the 71 west the lode is large, and is worth 5 tons of ore per fm. In the 61 west there is no material alteration; the lode is still disordered, but the general character of the ground is congenial for mineral. In the rise in the back of the 61, on the course of the caunter, the portion of the main lode which is being carried is worth 2 tons of ore per fm. In the 61 east we are driving by the side of the lode, and the ground is good for progress to the 50; the lode is of no change of importance. In No. 2 rise, in back of the 50 east (tribute pitch), the lode is worth 5 tons of ore per fm., but the ore is not so rich as present as formerly; probably, on the whole, it is worth 61. per fm. In the 40 east the lode is 6 feet wide, yielding capel, quartz, mundaic, yellow, and some rich oxide of copper, worth 401. per fm.—North Lode: In the 52 west the ground is moderately easy for driving, and looks favourable for mineral. There is no alteration at any other points which are not mentioned. We have sampled 198 tons of ore, computed, and I calculate we shall be prepared to put in a similar quantity when the regular sampling-day comes on again, at the end of May.

WHEEL GRENVILLE.—G. R. Odgers, March 30: The engine-shaft to sink below the 100, by nine men, at 241. per fm.; lode 18 in. wide, and in the western end of the shaft there is a good branch of ore; if it continues it will yield 1½ ton to the fathom. The 100 east, to four men, at 41. per fm.; lode 2 ft. wide; there being a good branch of ore nearly to the fathom; it is a little dry, but would yield from 1 to 1½ ton to the fathom. The 100 west, to four men, at 61. per fm.; lode at present split, but which I think will ere long produce a favourable change. The 90 east, to four men, at 31. 10s. per fm.; lode from 2 to 2½ ft. wide, composed of black and grey ore, embedded in quartz and gossan, worth from 1½ to 2 tons to the fathom. The 90 west, on the south part, to four men, at 51. 10s. per fm.; lode 1 ft. wide, composed of yellow ore and mundaic, with a great deal of water flowing from it, yielding 1 ton to the fathom, and opening good tribute ground. The 90 west, on the north part, to two men, at 61. 10s. per fm.; lode 10 in. wide, and worth 1 ton to the fathom, also laying open good tribute ground, and having symptoms of a greater improvement. A slope behind this place, to four men, at 21. 15s. per fm.; lode worth 101. per fm. The 80 east, to four men, at 61. 10s. per fm.; lode is about 3 or 4 fms. behind the improved lode we now have in the 90 east, where we are expecting an improvement. The 80 west, to two men, at 61. per fm.; the lode is at present small, producing a little ore.—Watson's Lode: The winze to sink below the 66, by six men, at 101. 10s. per fm.—lode small. The 66 east, to two men, at 101. per fm.; lode in like manner small, but which is bunchy, and I think a great deal of the ground will be taken away on tribute, after it is ventilated by the winze now sinking. The pitches throughout the mine are producing their usual quantities of ore.

WHEEL GRYLIS.—E. Rogers, J. Pope, April 4: Fisher's Lode: Annie's engine-shaft is down 6 fms. 1 ft. 6 in. below the 10; the lode is 2 ft. wide, producing good stones of tin. At the 10, east of this shaft, the lode is worth 41. per fm.; at this level west the lode is worth 21. per fm. At the flat-road, in the end driving west, the lode is 18 in. wide, opening tribute ground; in the end east the lode is small and poor. In the winze sinking in the bottom of the said level, east of the shaft, the lode is also small and unproductive.—Georgia Lode: In the stopes in the bottom of the 83 the lode is worth 251. per fm.; in the stopes in the back of this level, No. 1 is worth 181. per fm.; No. 2, 161. per fm.; and No. 3, 51. per fm.

WHEEL HARRIETT.—S. Williams, March 30: At the engine-shaft we have the cross-course, which is letting out much water, and has drained the 100 to the west of the cross-course at this level. I have to-day set six men to sink a winze on the main lode, on the cross-course, which is worth for copper ore 101. per fathom. The lode in the 100 east end is worth on the north and south parts 201. per fm. The stopes above the 100 are worth for tin 1 ton per fm., and copper ore 101. per fm. The lode in the 90 east end is divided with a horse of granite, both parts containing copper ore, but not sufficient to value. The stopes above the 90 are worth for copper ore 101. per fathom. The lode in the 30 is 1 foot wide, producing stones of ore. The lode in the 10 east end is poor. The lode in the deep adit end is producing spots of copper ore. The lode in the slope above the deep adit is worth 71. per fm.

WHEEL HEARLE.—N. Tredinnick, W. Wasley, March 30: The engine-shaft is now sunk to the 100, the lode producing. Just commenced to drive in the 100 west by three men, at 51. per fathom; the lode is worth 41. per fathom. The 90 west by three men, at 51. per fm.; lode 8 d. in 11. for tin; lode worth 151. per fm. This end has just now touched on the run of our best western tin ground, which shows it is lengthening eastwards, as well as westwards in the 80, which is very encouraging. The 80 west, by three men, at 50s. per fm., is worth 101. per fathom. The tin ground has lengthened greatly westward in this level. The 60 east at 61. per fm.; lode poor for tin. The 50 cross-cut south at 111. per fm.; ground very hard for driving. We have 13 tribute pitches working by 24 men, at tributes varying from 6s. 12 d. to 16s. in 11. at 601. per fm. We have put a new footway in the winze from the 12 to the 90. The mine is looking very well on the whole.

WHEEL HENRY.—E. Ralph, J. Cock, March 30: The water is drained to the 30 but we have not as yet been in the level. We have been in the 30 fm. level, 80 fathoms west of the shaft, where nearly all the ground above the level is taken away by former workers. According to reports we shall have some productive ground about the 30 and 40 fm. levels. The coming water is very little.

WHEEL KITTY.—R. Pryor, J. Nicholas, Wm. Higgins, March 30: Engine-Shaft: We are happy to state that an improvement in the 90, east of this shaft, being now worth 201. per fm. In the same level west we have cut the cross-course, which has heaved the lode 30 fathoms north, consequently the end has been suspended. In the last 2 fms. driving we had a good leader of tin from the bottom of the level 8 ft. upwards; this we consider speaks strongly for the ground below. The men from this end have been put

to rise in the back of this level in a lode 2½ ft. wide, worth 71. per fathom.—Hoigate's Shaft: The lode in the bottom of this shaft continues to improve, now producing stamping work for tin, with a most promising appearance. No lode has been taken down in the 65, west of this shaft, since last report. The rise above this level is still opening up satisfactorily, being worth 91. per fathom. Our progress in this level has of late been somewhat retarded by the deadness of the air; we have now put in an air-machine, worked by a small water-wheel, for its better ventilation, which will enable the men to work much more vigorously than before. The lode in the back of the 44 west is improving, being now worth 61. per fathom. The other tinwork operations at both shafts are much the same as last reported. The tribute department, on the whole, is somewhat improved.

WHEEL MARY EMMA.—Capt. Doble, March 30: Since the last general meeting the work has been chiefly confined to stopping below the adit west of the river; the lode is large, from 2½ to 3 feet wide, carrying good work for tin; there has been no lode taken down during the past fortnight, the men having been despatched the same. As you have Capt. Doble's report, I shall not enter much into the prospects of the mine. As I have repeatedly stated they are such as to warrant a more spirited working, I should strongly recommend that a shaft to a 12 fm. level below the adit, west of the river in the valley, be sunk, and in that level two ends be driven, one east and the other west, that the water may be drawn out at the engine-shaft west of the river, and that a cross-cut be put out south to intersect the south, or Emma lode, and to communicate with both parts of the mine; by so doing I believe you will be laying open a profitable mine, and it would be working it in a miner-like manner.

WHEEL NELSON.—J. Angove, April 2: We have cut the lode in the 44 cross-cut, south of the engine-shaft; we have driven into it about 1 foot, and find it to contain copper ore, with a large stream of water issuing from it, and when cut through I think you will find it to be a large lode.

WHEEL NORRIS.—J. Nance, J. Andrews, March 30: The engine-shaft is now sunk 10 fms. below the adit level, and we think it advisable to sink it 5 fms. deeper before cross-cutting to intersect the lodes, as the ground is so very favourable for alinking, &c. The flat-road shaft it down 5 fms. 4 ft. below the adit; the No. 3 lode is now in the bottom of the said shaft; it is composed of peach and quartz, with spots of yellow copper ore, and containing a little tin. At the east shaft we have 10 feet more to sink to get it as deep as the adit level, and there are 40 fms. more to be driven on the No. 3 lode, in the adit level, to reach a point at right angles with the said shaft, and then the distance to drive north from the No. 3 lode, as shown by our dialling, will be 15 fms. 1 ft. 6 in. to reach the lode in the east shaft; this, of course, depends on the lode continuing its course as at present. We have not taken down the lode in the east shaft this week, but cut into it to-day for a sample, and find it of good quality tinstuff. The No. 3 lode, in the adit end driving east, is much the same in quality as last reported. The lode in the stopes in back of this level is 2 feet wide, and worth about 81. per fm. The ground in the north cross-cut is still favourable for driving; it is now extended about 10 fms. north from the flat-road shaft. The railroad is completed from the stamps to the flat-road shaft-floors, and we shall set the stamps to work on Monday next. You are aware that the stamps have been ready some time, but we could not supply them with stuff before we had made the railroad. In two or three days more we shall complete it to the east shaft, and to go on with the stamping without interruption.

WHEEL PROSPIDNICK.—R. Kendall, April 1: Wilson's shaft is sunk 10 fms. below adit, and the lode has a very favourable appearance; we shall now commence driving east and west on the lode. The lode in the 12, east and west of Watson's shaft, is producing good stamping work.

WHEEL SIDNEY.—W. Edwards, April 4: There is no change to notice in the 60 cross-cut at the new engine-shaft since last report. At the old engine-shaft we have resumed the driving of the 25 east, by six men; the lode at present is about 8 in. wide, composed of friable spar, mundaic, and carrying a little tin; and, judging from the character of the lode, and the large quantity of tin that has been raised by tributers in the old workings above this level, and a few fathoms beyond the present end, we may fairly calculate on good results. The forking of water at the old shaft is at present progressing but slowly, by reason of the very heavy rains we have had of late.

WHEEL SHEPHERDS.—H. Bennett, April 3: The lode in the adit end, east of Rye's shaft, is much the same as last reported. We broke stones of lead in the adit end last week I think the best I ever saw since I have been agent at this mine. This lode is carrying a good head and tail, and regular underlie then I have ever seen before; it is 18 in. wide, composed of mundaic, jack, and fine lead. I have every reason to believe in driving east we shall cut another lode shortly.

WHEEL SICILY.—John Symons, April 2: We have been busily engaged fixing the large lift, which is almost ready for working. I hope to put it to work this evening, aliding well.

—J. Symons, April 3: I am happy to say we put the 20-inch lift to work to-day, and am glad to tell you it is working very well indeed, and the water is almost in fork, so we shall resume driving the cross-cut as quickly as possible. We have got 2 ft. more to drop this lift to get it to the bottom, as it is down on a pile of stuff.

WHEEL TRELAWNY.—F. Pryor, R. Pryor, J. Brown, W. Jenkin, W. Bryant, T. Grenfell, March 28: North Mine: We have set the 172 to drive east by six men, 7 fms., or cut the lode, at 91. 10s. per fm., which will take about two and a half months to accomplish. In the 162 north the lode is 2 ft. wide, worth 41. per fathom. The stopes in the back of the above level are two in number, each worth about 51. per fm. In the 162 south the lode is 1½ ft. wide, worth 51. per fm. The stopes in back of the above level are four in number, worth on an average about 61. 10s. per fm. In the 152 south the lode is 3 ft. wide, worth full 201. per fm.; price for driving 41. per fm. In the stopes in back of the above level the lode is 51. per fm.; this stopes is back from the end about 10 fms. In the 152, south from Chippendale's shaft, the lode is 1 ft. wide, worth 71. 10s. per fm., and looking very promising; price for driving 31. 10s. per fm. The stopes in back of the above level are three in number, worth on an average about 61. 10s. per fm. In the 140, north from Chippendale's shaft, the lode is poor at present. In the 132, north from Chippendale's shaft, the lode is a little improved; the lode is 1 ft. wide, worth 41. per fm.—South Mine: In the 152 north the lode is 2 feet wide, looking very promising. In the 142 north the lode is 1½ foot wide, worth 61. per fm., and looking better than when last reported. In the 130 north the lode is at present disordered by the influence of a slide. Our setting went off very well.

WHEEL TREMAYNE.—R. Williams, John Williams, April 1: In the 128, east of Allen's shaft, on Allen's branch, the branch is improving, and yielding good tinstuff; we have cleared this level, and commenced driving tinstuff through the boundary engine-shaft. In the 113, east of the same shaft, on Allen's branch, the branch is looking well, worth 251. per fathom. The stopes in bottom of the same level are worth on an average about 101. per fm. The stopes in back of the same level are worth on an average 101. per fathom. In the 103 cross-cut, north-east of the same shaft, towards Allen's branch, we have intersected a part of the engine lode about 6 in. wide, yielding good stones of tin, with a kindly appearance. The new engine-shaft is cut down within 5 fms. of the 53; the ground is rather harder, and the stuff more difficult to remove; we expect to complete the same to its required depth this month. We are still repairing Allen's shaft about the 113, where the ground has slipped and timber failed, in connection with the flookan, which is very troublesome to repair, and we hope to get the same in a working state shortly.

WHEEL UNITY CONSOLS.—W. H. Reynolds, March 30: We have to-day set the 75 west, to three men and three boys, at 70s. per fm.; the lode here is yielding good stones of ore. In the 75 east the lode is yielding good saving work, and is set at 81. per fathom. The stopes east of the lode, in the back of this level, are set at 61s. per fm., and are worth 101. per fm. The 65 east, on north of the lode, is set at one man and one boy, at 20s. per fm. The stopes west of the shaft, at this level, are worth from 81. to 101. per fm., and set to three men and three boys, at 50s. per fm. The adit level, on the south lode, is set to three men and three boys, at 57s. 6d. per fm.; the lode is 2½ ft. wide, and very promising.

YARNER.—J. Hampton, March 30: The 30 east on the north lode is worth quite 5 tons per fm. of good quality ore; we have driven this end full 15 fms. since the ore was first cut; the lode is all the size of the end, and wet, and the ore never more likely to hold on. As soon as the winze is holed, by sinking about 2 fms. more, we shall be in a position to pay the greater part, if not the whole, of the cost; and should we lay open the lode at the 40 only as good as we have it here, I am confident of having a dividend-paying mine. The lode will be taken down in the 20 west next week, but the last 5 or 6 fms. driving average from 2 to 3 tons per fm. Other places are looking much the same, turning out fair quantities of ore. We are very likely to sample at the end of April about 4000. worth of copper ore.

NORTH TREKERRY.—A fortnight ago, in this place, we gave some particulars of an interesting character respecting this mine, and as it is one of more than ordinary promise we applied to our correspondent for further information, which has just been received. He says that North Trekerby was set to work

May the day not be far distant! At the same time, let the readers of the *Mining Journal* remember that to be forewarned is to be forearmed.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WHEEL POLMAR.—We have been feeling our way for a long time by driving adit levels on five lodes, and have laid open eight distinct bunches of ore, but up to the present time have not proved them below these levels. Next month it will be just one year since we commenced to sink a new engine-shaft, which is now 17 fms. below adit. It is intended to put out a 15 fm. level below adit, for which they have tip-plate, &c., fixed, and are now sinking the shaft for another level. The 16 cross-cut will cut the lode in a short time, it is now driven about 14 fms. Summary of work done since last May:—The sump-shaft sunk 51 fms.; adit cross-cut driven about 30 fms.; the 15 cross-cut driven about 14 fms.; engine, capstan, and pitwork fixed and working well; a grinder now putting up, and will be completed in about a month's time, so that in one year the whole of the machinery will be fixed; and as we have 200 tons of ore at surface ready for dressing, and hundreds of tons laid open ready to be taken away when required, the mine to a certain extent developed, and should the lode be cut rich at the 15 fm. level, the mine must attract considerable notice.

CARADON CONSOLS.—Mr. Edward King has been appointed secretary of this mine, the late secretary having resigned. This mine adjoins West Caradon, and are daily in expectation of cutting the Menadus lode. Up to the present time, 20,000f. has been spent in machinery and in developing the property, which, being traversed by the West Caradon lode, is likely soon to become a productive position. It is the general opinion of the agents of the adjoining mines that Caradon Consols will eventually vie with its rich neighbours.

TOLVADEN.—Information was received in town on Wednesday from the agent at the mine that a considerable improvement has taken place at the 60.

RHYSCOG MINING COMPANY.—Extracts from a letter received from Mr. James Mitchell (of the Alderley Mines), one of the directors, dated March 21:—"As you will, probably, not be far distant, I lost not an hour in informing you of my return from the Rhyssog Mine, which I fully inspected yesterday, in one of the heaviest gales of wind and rain I was ever in—it was, indeed, a rough place in such weather. Being there, I gave them a thorough inspection, with the exception of the Cwm Dewi, which was at too great a distance in such stormy weather to visit. I am very much pleased with the general character of the stratification, it is so very similar to that of the Allenhead Mines of Mr. Beaumont, from which he has been making 50,000f. per annum for thirty years, in Northumberland, that my practical eye could scarcely detect any difference. The lodes are strong, and almost every vein, although they might not be thicker than my finger, contains here and there spots of lead. I am decidedly of opinion they will, if worked extensively and properly, make abundance of ore. The Cwm Dewi would, in my opinion, make a very good place for sinking it, and it might be done at once by a small water-wheel. It is a very pretty, promising lode, and one which would, at a depth of 20 or 30 fms., in my opinion, produce an abundance of ore."

GARDEN MINE.—Thomas's lode, at the adit level, still holds good. The engine-house will be completed next week, and it is expected the engine will be at work in six weeks from the present time.

VIRTUOUS LADY MINE.—The late Capt. Goss, before his illness, was working this mine at a profit, having discovered a rich deposit of copper ore in the River Tavy during a dry season, from which he raised and sold many tons of good quality ore. There are water-wheels, crusher, and drawing machine, together with pumps, smith's shop, &c., on the mine. There is also a never-failing supply of water for all purposes. The mine has only been worked for 25 fms. deep, from which nearly 200,000f. worth of ore has been raised. There are several hundred fathoms of unworked ground on the course of the lode, and a very promising lode has been cut in two places by costaining. It is in contemplation to work this property under the limited liability system, and there is every possible chance of its being a remunerative speculation.

EAST CARADON.—The counter lode having cut rich at the 60 fm. level, and improved in value to 60f. per fathom, speaks for the ultimate success of another prize in this rich district, and shows that a great improvement has taken place in the character of the lode at 10 fms. below the first discovery of ore at the 50. The quality of the ore at the 60 speaks well for deeper levels. The 50 has now passed through a good course of ore for 95 fms. in length, and the eastern end continues good, so that it is quite uncertain as to the length of ore ground being laid open in this mine. The monthly sales will now rapidly increase; and it should be borne in mind there are other very important points to come off from the cross-cuts driving north to what has been considered the main lodes of South Caradon; a discovery may, therefore, shortly be expected. With such facilities for working this mine, and all the machinery erected, there can be little doubt but the dividends will rapidly increase.

NORTH HALLENBEGGLE.—The engine-house will be completed in a few days, and in a fortnight the engine will be at work, and the necessary means adopted to fork the mine. The sett is surrounded by some of the richest mines in the district, and well merits the attention of investors.

WEST CONDERBOW (Camborne).—From the report of this mine, its prospects appear to be in a very encouraging position, and it states pretty confidently that future calls, from present appearances, must be comparatively small. It also states that "we have the necessary machinery, buildings, and other arrangements on the mine for its future operations; that all expenditure for the same, and for costs incurred to the present time (amounting, at the accounts on Jan. 3 and March 26 last, to the sum of 25,484. 14s.), are charged up; and that the present indications at different points of the mine are of a very promising character." When it is remembered that all the heavy outlay is made and charged up close, which we quite approve of, and that tin and copper to the extent of many hundreds of pounds have been sold by the adventurers from shallow levels, and that the levels and sump-shaft give improved indications of mineral deposits below and for immediate returns, there are most encouraging features connected with this mine.

THE VALE OF FERITH LEAD MINE (Wrexham) comprises the whole of the lands known as the Trimley Hall estate, which is about 84 acres, to which will be added a considerable extent of ground to the north-east, promised by the Earl of Derby and others. The sett is well adapted for mining, being bounded on the north-east by a river, from which levels can be brought in a westerly direction into the hill, thereby giving a large amount of backs, which may be worked high and dry all seasons of the year. There are six well-defined lodes, upon which shallow workings have been made from time to time, and from which considerable quantities of lead have been raised, but worked only by individual labour. The objects of the present company are to continue the adit level, which has been driven a considerable distance into the hill, and to cut down and resume the sinking of the engine-shaft, where there is a junction of lodes, as also to continue the sinking of a winze on the north lode, which is now producing very fine rocks of solid ore, with a stratification extremely promising for making a large deposit of ore in depth. A 30-inch cylinder condensing engine has been purchased, with boiler, &c., complete, which is on the mine, and will be erected with all possible dispatch. As soon as it gets to work, and the shaft and winze sunk a few fathoms, sufficient deposits of ore will be laid open to make this mine one of the most profitable of the district. The stratum is composed of white limestone, and the lodes are producing beautiful lead and spar, similar in all respects to the Marn, the Park, the Upper and Lower Tychant, the Stead, and other rich mines of the neighbourhood. There is an ample supply of water for mining operations, and coals can be had for the engine at 1s. 8d. to 3s. per ton. Samples of the ore, showing the stratification of the country in which the lodes are embedded, can be seen at the offices of the company, Crown-court, Threanedale-street, where further information can be obtained; and also of the broker, Mr. William Leelan, Cushion-court, Old Broad-street.

WHEEL HEARLE.—They have cut the tin in the 90 west sooner than was expected; lode now worth 15f. per fm. This run of tin in the 80 held, and still holds, west much further than in the upper levels, and as they now have it so soon in the 90, it shows that the tin ground is lengthening in depth, and that the deeper they go the better the mine becomes. As the sump-shaft is now sunk to the 100, and that level begun to drive towards the tin ground, it is evident that large profits must soon be given; this applies to the engine-lode only. The cross-cut now being driven south at the 60, and the 60 east towards the intersection, both to cut the south lode, are most important objects also, as if this lode is cut good, and there some little doubt of it, the mine will become one of the richest in the West of Cornwall. For the last month the sale of tin will be about 5 tons.

NORTH GREAT WORK MINE has been now for a considerable time almost unnoticed, in consequence of the returns of tin falling off, and instead of having a continuation of dividends two calls have been made, the last leaving the mine, after paying every liability, about 700f. in hand. As the tin, which has been held on March 5, a shaft has been opened to a depth of 50 fathoms from the surface, in the bottom of which a very good lode for tin has been discovered; this shaft is so situated that a level can be driven out from it to come in 10 fathoms below the run of tin ground discovered by the deep adit some 18 months ago. This ground when reached can be worked very profitably, and there are great chances of meeting with other bunches of tin between the two points, independent of that already discovered. The driving of the adit on the north lode, towards the junction of Wheel Gilbert lode (the chief object for which the mine was commenced), progresses favourably, a distance of about 16 fathoms having yet to be driven: 1800f. worth of tin has been sold from the back of the adit in 18 months, and considering the disadvantages of selling tin in the hands of the mine, the yield has been extremely large for a mine of these pretensions. Arrangements have now been made whereby the company rent stamps, burning-house, floors, and every necessary for dressing the tin, within a short distance of the mine, and in all probability the first parcel of tin will be ready for the smelting-house in five weeks from this time. The following report, by Capt. Pope, of Wheel Basset, will best explain the present position of the mine:—

April.—South Lode: I find the water is drained from Lloyd's shaft as deep as 10 fms. below the adit level, which is driven west about 8 fathoms, where the lode is 8 in. wide, producing good work or tin, I should say worth 8f. per fathom. The 10 is driven east of Lloyd's shaft 7 fathoms; lode at present split, but from its appearance I expect it will come together in a few fathoms driving, when have every reason to expect some change for the better. The deep adit level, east of the eastern shaft, is driven a great distance, which has passed through several fathoms of good tin ground; the lode at present is split into branches, but the ground appears congenial for tin, and I have no doubt in a few fathoms driving will be equally good, the distance to Wheel Gilbert cross-course being about 70 fathoms. The shallow adit is driven within about 17 fms. of the cross-course, where the lode at present is small and unproductive, but from the appearance of the stratum, which is a fine-looking killas, and very near the junction of granite, some change for the better may be expected very shortly. Looking at the mine throughout, I should say it is a good piece of mining ground, and I do not hesitate to state that if properly explored on about the cross-course large and profitable returns will be made. I also beg to state that the 10, west of Lloyd's shaft, is very near the carbons, where large returns have been made by the old workers, and I have no doubt will be equally good when met with in this level.

CALVADACK MINE.—A special meeting of the adventurers was held at Camborne, on Tuesday last; the attendance was large, and included nearly all the principal shareholders. Capt. Skewes having tendered his resignation, Messrs. C. Thomas and Son were unanimously requested to take the management, which request was cheerfully complied with. It was then proposed that the salary be ten guineas per month; but this proposal was not put to the meeting, as Capt. Thomas stated the adventurers should have his best services, and he should be well satisfied with five guineas per month, and it was, therefore, fixed at that amount; and it is not too much to say that the entire management of the mine is now in the hands of one of the most efficient men in the county. The affairs of the mine were then very fully investigated, and it appeared that, in consequence of the wet season, and an accident having happened to the piston, the water had accumulated in the lower levels, and some good tin ground could

not be reached; but, notwithstanding this, upwards of 400f. worth of tin had been sold during the month of March; full 500f. worth would be sold in April, and a much larger quantity in May. The "dry," which had recently been erected at considerable cost, was completed, and everything appeared to be in good working order. The general opinion appeared to be that a 10s. call at the next meeting, in May, would pay off all the costs incurred, and then it was probable that no further call would be required. It was expected the north lode would be reached in about three months. Capt. Thomas made a very minute and careful inspection of the mine a few days since, and expressed confidence in regard to its future prospects. The meeting closed with a vote of thanks to Capt. Thomas for the very handsome manner in which he had complied with the wishes of the meeting by accepting the management, and a vote of thanks to the Chairman, Mr. Clemence. The shareholders separated with the conviction that they have a property which may yet become exceedingly valuable.—*Camborne, April 3.*

CHARLOTTE UNITED is greatly improved in the 50 and 60 fm. levels, and they expect shortly to cut the lode that has proved so rich in the levels above.

CUDDRA.—These mines have since August been drained and cleared to the ends of the levels. It is expected that the levels above the 90 will from this time produce from 40 to 50 tons of copper per month, worth from 8f. to 6f. per ton. The ore ground driven through in the 90 is about 30 fathoms long and 3 fathoms in height, which was worked away by the old company, and produced upwards of 20 tons of black and grey copper ore, realising from 10f. to 12f. per ton. This is supposed to be the beginning of a rich deposit of ore, and as the shaft will be immediately sunk below the 90 through this lode, the result will soon be proved. The lode in the bottom of the level is composed of rich grey and black copper ore, mixed with white sandy quartz, and is probably in a beautiful channel of clay-slate. It is expected that the shaft can be sunk to the 90 in two months. The tin department is opening well, and it is quite likely the stamping-engine will be set to work early in May.

ROSEWALL HILL AND RANSOM UNITED.—The tin sold since the meeting, for one month, was 10 tons 10 cwt., for 715f.; this quantity, but for the great fall in tin, would have given more than 300f. for the month; as it is, it will leave 200f.—[No change in the mine.]

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, April 5, 1861.

COPPER.			BRASS.		
	£	s. d.		Per lb.	
Best selected.....p. ton	101	0 0	Sheets	94d.-10d.	
Tough cake.....	98	0 0	Wire	94d.-94d.	
Tile	98	0 0	Tubes	104d.-11d.	
Burna Burna	100	0 0			
Copialo	—	—			
Copper wire	0 10	0 10 1/2			
ditto tubes	0 11	—			
Sheeting & bolts ..	0 10 11	—			
Bottoms	0 10	—			
Old (Exchange) ..	0 9 3/4	—			
IRON.			FOREIGN STEEL.		
	£	Per Ton.		Per Ton.	
Bars, Welsh, in London...	6 10	0 7 0 0	Swedish, in kegs (rolled) ..	16 10 0	—
ditto, to arrive	6 0	—	(hammered) ..	17 0	0 18 0 0
Nail rods	7 0	—	ditto, in fagots ..	18 10	0 19 0 0
Bars, Stafford, in London ..	7 7	6 7 15 0	English, Spring ..	18	0 23 0 0
ditto	7 10	0 8 0 0	Bessemer's Engineers Tool ..	44	0 0 —
Hoops	8 10	0 8 15 0	Spindle ..	30	0 —
Sheets, single	9 0	0 9 15 0	QUICKSILVER	7 0	0 p. bottle
Pig No. 1, in Wales ..	3 0	0 4 0 0			
Refined metal, ditto ..	4 0	0 5 0 0			
Bars, common, ditto ..	5 7	6 5 10 0			
ditto, merchant, in Tees ..	6 15	7 0 0			
ditto, railway, in Wales ..	5 5	0 0			
ditto, Swed., in London ..	11 5	0 12 0 0			
To arrive	2 8	0 2 10 0			
Fig. No. 1, in Clyde ..	—	—			
ditto, f.o.b., in Tees ..	—	—			
ditto, f.o.b., in Tees ..	—	—			
Staffordshire Forge Pig ..	3 10	0 3 12 6			
Welsh Forge Pig	—	—			
LEAD.			TIN.		
	£	s. d.		Per lb.	
English pig	21	0 0 22 5 0	English, blocks	120	0 0 —
ditto sheet	22	0 0 —	Ditto, Bars (in barrels) ..	121	0 0 —
ditto red lead	23	0 0 24 0 0	Ditto, Refined	122	0 0 —
ditto white	30	0 0 31 0 0	Banks	123	0 0 124 0 0
ditto patent shot ..	24	0 0 24 10 0	Straits	116	0 0 —
Spanish	20	5 0 20 10 0			

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The Metal Market exhibits very little activity, but after the stagnation that has so long existed even the small business at present doing is exceedingly welcome. The demand for export, both to the Continent and to India, has improved, and the further reduction in the Bank rate will, doubtless, have a beneficial effect by encouraging speculation, which, when money is dear, is almost unknown. About the only drawback to a good spring trade is the unfortunate state of things existing in America, which precludes all business with that market, and thereby closes one of the hitherto largest outlets for metals.

COPPER.—Much greater firmness is evinced in all descriptions of English; smelters, however, still find a difficulty in realising full prices. The demand for manufactured is pretty good, but hardly sufficient to keep makers fully employed. Foreign has scarcely undergone any alteration since our last report, quotations remaining the same. The market, if anything, a shade firmer. Yellow metal in fair enquiry.

IRON.—Railway bars are still to be purchased as low as 5f., f.o.b. in Wales; very little doing. Merchant bars in fair request for India at 6f., f.o.b. in the Thames. The export demand for Staffordshire makes has slightly improved, but manufacturers are still far from busy, a good many only working about half their usual strength. Stocks have accumulated greatly during the late depression, and are still heavy. Swedish of ordinary specification in less demand, at 11f. 5s.; broad sizes enquired for, and scarce. Scotch pigs inactive, at 4f. 3d., m.n.

LEAD.—In English pig a tolerable business is doing; prices are rather easier, at 21f. for common brands, and 22f. 5s. for W.B. Sheets and shot neglected. Soft Spanish pig saleable to a limited extent, at 20f. 6s.

SPELTER.—This metal has altered its position very little during the week; some parcels have changed hands at 18f. 5s. for cash, in warehouse and for arrival, at which price there are still a few sellers. The stock here on March 30 was 3990 tons, showing a diminution of upwards of 100 tons since the end of February.

ZINC.—Sheets, 24f.

TIN.—The tin market is extremely dull, and smelters of English have to-day announced a further reduction of 4f. per ton, making present quotations for block and ingot 120f.; bars, 121f.; refined, 122f. In foreign, business is reported to have been done in Straits during the past week at 116f. 10s. for cash, and 117f. with long prompt. Banca, 122f. (nominal). The price of Straits since the decline in English will be about 115f. to 116f.

TIN-PLATES.—It must in the present state of trade take some considerable time for this article to recover itself sufficiently to render manufacturing profitable; a better demand has lately sprung up, and the fall in tin will benefit makers; higher prices are already quoted—23s. to 23s. 6d. now being asked for ordinary brands, which were to be bought last week at 6d. to 1s. per box lower.

STEEL.—Swedish keg and faggot quiet at quotations. English not much enquired for.

LIVERPOOL, APRIL 4.—Since the preliminary meeting, on March 28, there has been considerably more business doing in this market, and buyers appear to have more confidence. Prices of both Staffordshire and Welsh iron are steady, and although some large sales of the latter were reported at 5f. per ton a few days ago, no good brands can now be bought under 5f. 2s. 6d. to 5f. 5s. per ton. Copper and block-tin are without further change, but the demand is only moderate. Tin-plates are in fair request, and sellers now quote 22s. 6d. for coke IC as the lowest. Scotch pigs are a fraction lower than this day week, but the market closes with a firmer tone. The reduction in the Bank rate of discount to-day to 6 per cent., will, no doubt, strengthen the position of the metal market generally.

WOLVERHAMPTON.—From Mr. S. Griffiths' "Iron Trade Circular:" Current prices of pig iron (corrected to Thursday evening).—Staffordshire cold blast, 4f. 5s.; Old Windmill End Mine, Nos. 1, 2, and 3, melters, made with Lord Ward's thick coal warm air, 4f.; Old Windmill End Mine Forge pig-iron, made with Lord Ward's thick coal, 3f. 12s. 6d.; best native hydrate pigs, 3f. 10s. to 4f.; first-class All Mine grey forge pigs, 3f. 5s. to 3f. 10s.; good mine pigs, with a modicum of fine cinder, 2f. 10s. to 2f. 15s.; mine pigs, deteriorated by cinder, 2f. 7s. 6d. to 2f. 12s. 6d.; Cleator Moor hematites, 3f. 7s. 6d. to 3f. 10s.; Barrow hematites, 3f. 7s. 6d. to 3f. 10s.; Workington hematites, 3f. 7s. 6d. to 3f. 10s.; Kirkless Hall hematites, 3f. 6s. 3d. to 3f. 8s. 9d.; grey forge cinder pig-iron, 2f. 5s. to 2f. 10s.; white forge cinder pigs, 2f. 2s. to 2f. 7s. 6d.; ordinary melters, Nos. 1, 2, and 3, 2f. 12s. 6d. to 2f. 17s. 6d.; superior makes of mine melting iron, 3f. 2s. 6d. to 3f. 15s., according to make and quality. The above prices are all delivered on to the wharves at the South Staffordshire manufacturing. Favourite Shropshire and Forest of Dean brands, 4f. 5s. delivered; northern hematites, from 3f. 5s. to 3f. 10s., according to brand or quality.

COAL MARKET.—On Monday the arrival of 89 fresh ships caused a very dull market for house coals, at the prices of last week. Hartley's were in short supply, and realised an advance of 6d. per ton. Manufacturers' without alteration. Best house coals, 17s. 6d. to 18s. 6d.; seconds, 15s. to

16s. 6d.; Hartley's, 15s. to 16s.; and manufacturers', 13s. to 15s. per ton. —Wednesday: Only four ships having arrived, the tone of the market for house coals was stronger, but no improvement in prices. Hartley's, owing to the small quantity on offer, obtained an advance of 1s. per ton, sales being made at 17s. per ton. Manufacturers' steady at Monday's prices. —Friday: 37 arrivals. The market was firm for all descriptions of coal at Wednesday's prices. South Hetton Wallsend, 18s. 6d.; Haswell Wallsend, 18s.; Eden Main, 16s. 6d.; and Hartley's, 16s. 6d. to 17s. per ton. —25 cargoes unsold; 80 ships at sea.

Importation of coals into London by sea in the month of March, 1076 ships, containing 348,172 tons, being a decrease on the corresponding month last year of 4820 tons. Importation of coals into London by railway and canal in the month of March, 168,166 tons, being an increase on the corresponding month of 1860 of 44,888 tons.

The MINING SHARE MARKET, since our last, has been much interrupted by the holidays, but owing to the further reduction in the Bank rate of discount, and what is considered more favourable news from America, rather more activity has been observed in shares generally, and several shares which have been depressed more than prospects seemed to justify have been enquired for and in demand. The dividend mines for this

most part are flat, caused, no doubt, by the absence of any exciting improvements, and the reduction in many cases, and the suspension in some, of the usual dividends, owing to the delays caused by the severe weather two months ago. Those chiefly dealt in have been East Caradon, Marke Valley, Wheel Seton, South Frances, East Basset, West Caradon, Wheel Clifford, &c. In other mines, East Grenville, East Russell, Great Alfred, Great Retallack, Alfred Consols, West Sharp Tor, Sortridge Consols, Grenville, East Carn Brea, Stray Park, New Seton, North Minera, Billins, West Bryn Gwio, Trevoole, Treylon Consols, and a few others, have been chiefly dealt in. South Frances have been flatter, and more freely offered at 145 to 155. Wheel Ludcott, 3f. to 3f. 1/2; at the meeting no dividend was declared, owing to an accident, and the frost causing a delay in the sampling. The mine is understood to be looking well. East Caradon rose after our last to 19f. 20, but on Tuesday (Monday having been a holiday) declined to 18f. On Thursday they opened 17f. to 18f., and afterwards rose to 18f. 19. The shares have fluctuated very much during the week, owing almost entirely to market operations, as the mine has steadily improved from the time the lode was cut. It is said there were heavy "bears" at the last account-day, and that the shares have not all been delivered, and to get them in all sorts of means are resorted to to get down the price. Thus, as we have frequently written before, the bona fide holders of a first-class property see it depreciated in value, and the public are bewildered and prevented investing by the hourly fluctuations they see quoted, but cannot understand, and which are caused to suit the operations of mere jobbers in time bargains. We stated last week that it was considered by some that the lode cut in East Caradon was not the "canter;" it is now, however, understood to be so, though the cross-cut is being continued to intersect the south part of it, so as to drain a winze commenced from the south part of this lode in the 50. The value of the lode as cut through in the 60 is 55f. per fathom. Notwithstanding the attempts of the "bears," the shares leave off firmer, at 19 to 19 1/2.

Marke Valley shares have been in good request at 6f. to 7. Alfred Consols, 2f. to 3f.; Belford Consols, 3s. 6d. to 5s.; Bryn Gwio, 3f. to 3f. 3d.; Carn Brea, 8f. to 9f.; Calstock Consols, 11s. 6d. to 13s. 6d. Cook's Kitchen, 15 to 16; it is understood that a dividend will be declared at the meeting, in about a month's time. Calvadack, 2 to 3; a special meeting of the shareholders was held in Cornwall on Tuesday, when, at the request of the holders of about 700 shares out of 900, Capt. Charles Thomas again resumed the management of the mine; and from a thorough inspection of it, he thought that with the present price of tin it could be worked at a trifling monthly loss. Devon Great Consols, 340 to 350; Ding Dong, 9 to 11. Wheel Basset shares have been flatter, and leave off 9f. to 10f. ex div.; at the meeting the accounts showed a profit of 891f. 1s. 6d. on the two months, and a dividend of 2f. per share (1024f.) was declared, leaving 1043f. 11s. 6d. in hand. The cross-cut at the 100 south, from Carnie shaft, is being extended, for the purpose of cutting the south lode 55 fathoms deeper than any other level on this lode, and expect to cut it shortly. The pitches in copper and tin in the different lodes are described as producing average quantities of copper and tin. New Treleigh, 40s. to 45s.; the new lode lately cut in the cross-cut south at the 70 will produce full 2 tons of ore per fm. Drake Walls, 17s. 6d. to 20s.; East Basset, 102f. to 105. East Carn Brea shares leave off 8f. to 8f. 1/2; firm; the report, which is very favourable, states the 26 west is worth 2 tons of copper ore per fm.; the winze below the 26 is yielding 6 tons per fm.; the 40 west, 3 tons, and within 2 fathoms of being under the winze; the ore sampled, 46 tons, yields a produce of 11f. per cent. Gawton United, 4s. 6d. to 6s. 6d.; Grambler and St. Aubyn, 19 to 20; Great Wheel Fortune, 8f. to 9f. Trevoole shares have been in good demand, and advanced to 5f. 1/2; the mine is said to be opening out a large extent of ore ground, which will considerably increase the future samplings. Herodfoot, 37 to 39; Kelly Bray, 1f. to 1f. 1/2; Lady Bertha, 19s. 6d. to 20s. 6d.; North Basset, 5f. to 6f.; North Downs, 4 to 4f.; North Minera, 37s. to 38s.; North Robert, 2 to 1; North Trelawny, 4s. to 6s.; North Treskerby, 25 to 26; Pendeen, 5 to 5f.; Bottle Hill, 24s. to 26s. East Grenville shares have kept in good demand all the week at 28s. to 31s., and leave off 28s. to 30s.; the lode in the shaft below the 26 is worth 30f. per fm. for copper, and holding out great prospects. Craddock Moor, 25 to 27; the dividend here was 4s. per share; the balance in favour of the company was 1004f. 7s. 5d. At the North Grambler meeting the accounts presented showed a balance of 793f. 4s. 7d., and a dividend (the first) of 10s. per share (683f.) declared. The agents reported that the lode in the 65, east of new shaft, is worth 12f. per fm.; the 40 end, 12f. per fm. Providence Mines, 38 to 40; Sortridge Consols, 11s. 6d. to 12s. 6d.; South Basset, 14 to 16; South Curdrow, 16s. to 18s.; South Tolgus, 42f. to 45; Stray Park, 35f. to 36; Tamar Consols, 1f. to 2f.; Tincroft, 5f. to 5f. 1/2; Tolvadden, 2 to 2f.; Treylon Consols, 12f. to 13f.; Vale of Towry, 8s. to 9s.; West Frances, 15 to 16; Wheel Arthur, 4s. to 6s.

Great Retallack shares have been flatter, at 26s. to 28s.; the new lode lately cut is 5 feet wide, and very promising for the depth, 4 fms. Wendron Consols, 16 to 18; we understand no dividend was declared at the meeting, owing to the decline in the price of tin, and the reasons which seems to be affecting all mines for the time. Dolcoath, 470 to 490; the fall of tin is said to make a difference of at least 1000f. a month in the profits of this mine. East Wheel Russell advanced to 7f., and a large business done, but leave off 6f. to 7; in the 100 cross-cut north a portion of the lode is found to be standing, and producing fine stones of red oxide and green carbonate of copper. A good improvement is expected at this point. West Caradon, 74 to 76. West Sharp Tor, 35 to 40; the report states that 2f. feet have been cut into the ore part of the lode in the 150 cross-cut, and it is composed of gossan of the finest description, quartz, and prill, impregnated with rich crystallised native and red oxide of copper, and also about 8 or 9 oz. of silver per ton of ore. Wheel Bulger, 11f. to 12f.; Wheel Grenville, 2f. to 3f.; Wheel Kitty (Leland), 12 to 13; Wheel Margaret, 46 to 48; Wheel Mary Ann, 13 to 15; Wheel Moyle, 37s. 6d. to 42s. 6d.; Silver Vein, 2f. to 3f.; Wheel Seton, 82f. to 87f.; Wheel Trelawny, 12 to 13, and in good request; the lode in the 152 south is worth 20f. fm., and driving at 4f. per fm. Michell, 7s. 6d. to 8s. 6d.; the lode in the shaft, 3 fms. below surface, is from 4 to 5 feet wide, with fine stones of lead ore occasionally, and a good-looking lode. Wheel Uny,

6, 6½, 6½, 5½, 5½, 5½, 5½, 6, 6½, 5½; Cobre, 39½, 39½; Lusitanian, 2½; General, 22½, 22½, 22½, 22½, 23; Port Phillip, 4.

With the exception of United Mexican, the market "outside" for Foreign and Colonial Mining Shares has been quiet during the week: at one time these shares reached 5½, but a reaction has set in, the closing price being 5½ to 6, business having been done at 5½; a remittance is expected sufficient to cover the arrears of interest and a portion of the capital debt, while the mine is improving. General, 22½ to 23; a slight advance. Cobre, 39½ to 40½. Nerubudda Coal, 4½; the first annual meeting has been held this week, and passed off satisfactorily, further encouragement being given to the shareholders by the advice received from India, very good coal being met with in No. 1 level. Port Phillip, 14s. 6d. to 15s. 6d.; Mariquita, 4 to 4½; Labuan Coal, 2½ to 3½, prem.; Lusitanian, 2 to 2½; Fortuna, 2 to 2½; Linare, 9½ to 9½.

The following are the Government Returns of the exports of articles identified with mining, the produce and manufacture of Great Britain, for the two months ending Feb. 28, 1861; and also as compared with the two months ending Feb. 28, 1860; extracted from the "Accounts relating to Trade and Navigation," published by the Board of Trade:—

DECLARED VALUE FOR THE TWO MONTHS ENDING FEBRUARY 28.			
	1860.	1861.	Decrease.
Coal and culm	£ 372,189	£ 403,314	31,125
Hardwares and cutlery	531,360	442,961	88,399
Machinery:—			
Steam-engines	£113,564	£111,230	2,334
Other sorts	342,915	327,705	15,210
Total	£1,360,028	£1,285,210	74,818
Metals:—Iron—Pig	£ 79,487	£ 92,632	13,145
Bar, bolt, rod	310,359	208,910	101,449
Railway	346,979	351,514	4,535
Wire	45,242	27,648	17,594
Cast	76,221	68,538	7,683
Wrought	389,718	337,676	52,042
Steel	148,338	98,657	49,681
Copper—Unwrought	177,562	168,792	8,770
Sheets	280,226	270,047	10,179
Wrought	26,890	24,388	2,502
Brass	61,557	55,636	5,921
Lead—Pig	24,111	16,954	7,157
Ore	42,505	47,915	5,410
Tin—Unwrought	222,177	136,856	85,321
Plates	264,682	136,856	127,826
Grand total	£3,595,240	£2,994,966	£600,274
Less increase—coal and culm, 31,125; brass, 572; tin, 31,697			
Total decrease			£600,274

At Pool Ticketing, on Thursday, 3831 tons of ore were sold, realising 19,797 16s. 6d. The particulars of the sale were—Average standard, 135½; average produce, 5½; average price per ton, 5½; quantity of fine copper, 224 tons 4 cwt. The following are the particulars:—

Date.	Tons.	Standard.	Produce.	Price per ton.	Ore copper.
March 7.....	2893	126 9 0	7½	£ 5 10 0	£ 90 7 0
" 14.....	2975	130 8 0	6½	5 17 0	83 10 0
" 21.....	5056	131 17 0	6½	5 12 0	88 10 0
" 28.....	3507	130 14 0	6½	5 14 6	95 17 6
April 4.....	3831	135 6 0	5½	5 3 6	88 6 0

Compared with last week's sale, the advance has been in the standard 12s., and in the price per ton of ore about 1s. Compared with the corresponding sale of last month, the decline has been in the standard 2½, and in the price per ton of ore about 2s. 6d.

At Wheel Basset meeting, on Tuesday, the accounts for January and February showed—Balance last audit, 1176 10s.; copper and tin sold, 3444 7s. 4d.; discounts, 61 5s. 9d.—4627 1s. 3d.—Mine cost, merchants' bills, and sundries, 2559 11s. 7d.; leaving credit balance, 2067 11s. 6d. The profit on the two months working was 691 1s. 6d. A dividend of 1024 (2½ per share) was declared, and 1043 11s. 6d. carried to credit of next account. They are still driving the 100 cross-cut south from Carnick shaft for the purpose of cutting the south lode, which they expect to do shortly, and which will be 55 fms. deeper than any other level on this lode. The pitches on copper and tin on the different lodes are still producing average quantities of copper and tin.

At the Wicklow Copper Mine Company meeting, in Dublin, on March 30 (Mr. J. Barton in the chair), the accounts for the half-year ending March 1 showed—Copper pyrites, pyrites, riddings, &c., sold from Ballymurtagh, 28,535 14s. 8d.; miners' rents and transfer fees, 431 3s. 4d.—28,578 18s. 4d.—Mine cost, merchants' bills, and sundries, 13,474 1s.; leaving credit balance of, being the profit for the half-year, 15,044 18s. The balance of assets over the liabilities was 37,522 16s. 4d. Of the half-year's profit, 2½ per cent., 377 12s. 5d. was deducted and added to the indemnity fund against bad debts; and a dividend of 2½ per cent. per share, free of income tax, was declared, carrying over the sum of 1024 1s. 7d. to the surplus fund. There had been a gain on the estimate of the old outstanding smalls, and on the estimates of the March and Sept. half-years of 1860, amounting to 1166 18s. 4d., which, with the surplus of 1337, carried over from the last half-year, had enabled the directors to pay for the important addition to their plant of the new engine, engine-house, and lighter, without any material reduction of the surplus fund. Arrangements had been made by which cash was paid for the ore, and everything delivered was paid for, and by it they were making 4000l. or 5000l. a year. The retiring directors were re-elected. Details elsewhere.

The Cwm Erfin Mining Company, on March 28, declared a dividend of 6500 5s. (15s. per share).

At North Grambler Mine meeting, on March 26, the accounts showed—Balance last audit, 453 13s. 1d.; copper ore sold (less dues, 1-15th), 1064 7s. 2d.—1518 10s. 3d.—Mine cost, Nov. to Jan., 391 7s. 9d.; tributors' balance, 209 1s. 10d.; merchants' bills, 1706 6s. 1d.; leaving credit balance, 798 4s. 7d. A dividend of 638 (10s. per share) was declared, and a balance of 115 4s. 7d. carried to the credit of the next account. The report of the agents (Capt. Joseph Vivian and W. Pascoe) stated that the lode in the 65, east of new shaft, had improved both in size and appearance. It was now 3 ft. wide, and worth 12½ per fm. in, and looked kindly for further improvement, and could be driven for 7½ per fm. In the 40, driving west on south lode, from the rise over the 60 cross-cut, at the new shaft, the lode was 2 ft. wide, composed principally of gossan, occasionally impregnated with copper ore. There were 14 men on tribute, at an average of 6s. in 1½.

At Craddock Moor bi-monthly meeting, on March 26 (Mr. J. Philp in the chair), the accounts showed—Balance last audit, 1059 7s. 8d.; ore sold, 1004 14s. 4d.; carriage, 64 6s. 2d.—3028 1s. 2d.—Dividend paid in Jan., 211 1s.; agencies, labour cost, &c., 1206 1s. 1d.; doctor and club, 171 9s. 4d.; merchants' bills, 441 6s. 2d.; sundries, 251 13s. 6d.; lords' dues, 122 4s. 10d.; leaving credit balance of 1004 7s. 8d. A dividend of 211 1s. 1d. (4s. per share) was declared, and 793 7s. 8d. carried to credit of next account. The profit on the two months' working amounted to 155 19s. 9d. The agents report that since the last meeting Taylor's lode has been cut at the 42, north of Fox's shaft, worth about 1 ton of ore per fm. Edmund's engine-shaft is 9 fms. below the 84, and ground more favourable for sinking. The next bi-monthly sale will be about 260 tons of good quality copper ore.

At Wheel Ludcott general meeting, on March 26, the accounts showed—Balance last audit, 1960 15s. 2d.; ore sold, 1425 19s. 4d.—3406 15s. 6d.—Dividend paid Dec. last, 960 1s.; labour cost, agencies, &c., 1247 9s. 6d.; lords' dues, 121 4s. 1d.; doctor and club, 207 19s. 6d.; merchants' bills, 578 18s. 8d.; sundries, 391 3s. 10d.; bank interest and commission, 167 12s.; leaving credit balance of 422 1s. 6d. The agents report that in consequence of the increase of water in the bottom of the mine the sale of ore has been delayed three or four weeks, and, therefore, only one parcel sold during the quarter, and as the full cost is charged up the accounts will be in a better position in future.

At the Pant-y-Buarth Mining Company meeting, on March 21, the directors made a call of 1½ per share, making 6½ per share paid up. The engineer reports that the shaft has been sunk 90 yards, and gone through some good ore ground; the lode in the bottom being better than for the last 5 fms. A lode of a most promising character has been intersected at a depth of 40 yards, north of Goodwin's shaft, running nearly parallel with the Old Pant-y-Buarth lode. This depth is considered too shallow; a level is, therefore, being driven at the 66, which is expected to cut the lode in about 8 yards further driving.

At Caradon Consols Mine meeting, on Thursday, the accounts showed a debit balance of 696 9s. A call of 15s. per share was made. The agent's report was considered highly satisfactory. Mr. G. Rice tendered his resignation of the purveyorship, which was received, with the unanimous thanks of the shareholders for his past attention to the affairs of the company. Mr. Edward King, of 27, Austinfriars, was appointed the future purveyor.

At Great Wheel Baddern Mine meeting, on March 26, the accounts showed a debit balance of 638 17s. 11d. A call of 4s. per share was made. Mr. C. Hill (the Chairman) accompanied by Mr. Mortimer, of Exeter, had visited the mine, and found the machinery in good working order, and the mine looking so well that the best results may be expected by the adventurers as imminent.

At South Wheel Lovell meeting, on March 27, the accounts for the four months ending December showed—Balance last audit, 371 10s. 3d.; mine cost, merchants' bills, and sundries, 809 18s. 10d.; dues, fees on Datchy lease, &c., 541 12s. 8d.; 1s. 1d.—Tin sold, 224 5s. 6d.; calls received, 153 12s.; leaving debit balance, 518 3s. 7d. The loss on the four months' working was 634 5s. 4d. A call of 10s. per share was made. Captain T. C. Burton reported upon the various points of operation. They hope to sell one month's tin (about 1000 worth) in the first week in April.

At the East Trekerby Mine meeting, on Monday, the accounts for the four months ending February showed—Balance last audit, 544 11s. 6d.; mine cost, 635 16s. 2d.; merchants' bills, 443 10s. 9d.—1622 18s. 5d.—Call made December, 1024 1s. leaving debit balance, 692 18s. 6d. A call of 15s. per share was made. Mr. Downing was instructed to commence proceedings to compel immediate payment of the arrears of call. The report of the agents (Capt. J. Nancarrow and R. Knuckey) was read, which stated that the engine-shaft was down 18½ fms. below the adit, and that they intended driving north and south in the 90 to reach the lode already gone through, and another south of the shaft, and then to get below the old workings, when something valuable was expected to be met with. The surface work had been completed, and their attention would now be directed exclusively to the sinking and developing the mine, in the doing of which the monthly cost would be considerably less than before, with every prospect of being amply repaid. "The high opinion entertained of this district may be judged of from the facts that the two or three mines already worked have opened up well; that all the remaining ground is secured for mining purposes; that in addition to the powerful engines already erected, and in course of erection, two are to be erected immediately in the ground adjoining this set, on the west and south-west; that there is scarcely such activity shown, nor amount of capital being expended in the working

of new mines in any other district in the county. There is every probability, too, from previous successes and present appearances, that these efforts will prove eminently successful. Such, then, is the ground in which we are at work, and though it may take time in its development, still that development is likely to be satisfactory and remunerative."

At Dolcoath United Mine meeting, yesterday (Mr. Climas in the chair), the accounts showed a credit balance of 87 18s. 3d. Details elsewhere.

At South Minera general meeting, held at Chester, on Wednesday (Sir Edward Walker in the chair), it was resolved to bring the company under the Limited Liability Act, in 4000 shares, of 5l. 5s. each (of which 17 12s. has been paid). After some discussion, Articles of Association were adopted, subject to certain details to be settled between the solicitor and a committee of shareholders then elected. The following gentlemen were appointed the directors:—Sir Edward Walker, Mr. Bernard Hall, of Liverpool, Mr. E. C. Walker, of Walker, Parker, and Co.; Mr. Thos. Dixon, banker, Chester; Mr. Adam Eytton, Holywell; Mr. Wm. Keates, of Newton, Keates, and Co.; and Mr. A. O. Walker, of Walker, Parker, and Co. More vigorous operations are to be carried on as soon as the company is registered. The workings are about one mile from those of the Minera Mines, and from the favourable indications and circumstances connected with South Minera, there are the strongest reasons for expecting that a small outlay will lead to valuable discoveries and good profits. Messrs. John Taylor and Sons (the managers of the Minera Mines) are to be the mining engineers.

At the Camborne Vein Mine meeting, on March 27, the accounts for the four months ending February showed—Balance last audit, 1920 2s. 9d.; mine cost, 1760 17s. 10d.; merchants' bills, 552 16s. 3d.; tribute pay on ore sold, 87 17s. 2d.; tribute subsist, 151 9s. 9d.; proportion of loss in Wheal Francis (3-4ths), 115 10s. 3d.; rent, 60 1s.; interest and commission, 10 17s.—4599 11s.—Call, 2300 1s.; copper sold (less dues, 1-20th), 400 18s. 7d.; tin (less dues, 1-20th), 211 13s. 2d.; crushing ore for Stray Park adventures, 25 5s.; water rent from Wheal Francis, 82 3s.; leaving debit balance, 1941 11s. 3d. The Wheal Francis account for four months ending Feb. showed—Mine cost, 717 17s. 4d.; Camborne Vein adventures water charge, 82 3s.—1547 9s. 4d. A call of 10s. per share was made. The committee reported that having given the fullest consideration to the proposals of Mr. Reynolds, in reference to the land necessary for the steam-stamps and dressing-floors, and to the working of Wheal Francis through his property, they had come to the conclusion that before any reply should be given to him it would be desirable to have the mine inspected by two competent agents, and they had asked Capt. Chas. Thomas and W. Teague to inspect and make a report on an early day. The purser was, therefore, requested to inform Mr. Reynolds that he should have a reply as soon as possible, and full powers were given to the committee to make such agreement as they might think right with the lord, and also to make arrangements for the erection of a steam-stamp if they deemed it prudent so to do. The name of Mr. T. S. Bolitho was added to the committee of management. A vote of thanks was passed to the committee for their valuable services. The report of the agents (Capt. W. Bawden and N. Clymo), referring to the south lode, stated that there were about 180 fms. of the skip-road put in, and they calculated to have the shaft in full course for driving by the time the surface operations were completed. With regard to the main lode, the report stated that they had kept their full power in prosecuting the shaft, and, consequently, had not increased their hands in other parts of the mine.

At the New Wheel Vor and East Wheel Metal meeting, on Wednesday, the accounts for three months showed—Tin sold, 572 17s. 10s.; calls received, 868 16s. 10d.; loans received, 984 3s.—2425 18s. 10d.—Mine cost, merchants' bills, and sundries, 1791 0s. 11d.; loans paid off, 634 17s. 11d.—2425 18s. 10d. The balance against the mine upon the asset and liability account has been increased from 2672 3s. 7d. to 2946 16s. 4d. Mr. G. T. Oldfield, the secretary, read the agents' report, in which the prospects of the lode before incuring upwards of £5000 had been detailed. He also read a letter, in which the captain explained that the current trade of the 50 to been going on for so short a time that it was not necessary to report upon it; he hoped, however, that some weeks before the next meeting he would be in a position to report that the shaft had been sunk to the 60, and that they had a good course of tin. The plans and sections of the mine were exhibited, and the secretary explained that the intersection of Smith's lode was an important point, and as the dip appears to have been greater than was expected they would have a shorter distance to drive to reach it—they were now, indeed, within about 6 fms. The change of dip was very advantageous to the mine. Only one cross-cut was being driven to intersect Smith's lode, as it was merely a trial; they would like to see the value of the lode before incuring the expense. He thought there was no doubt that in depth Smith's, Gorton's, and Bramble's lodes would combine to form one large lode, but at what depth this junction would take place had, of course, yet to be seen. The junction which they looked forward to at the 60 would be west of the shaft. After discussing the immediate financial requirements of the mine, a call of 10s. per share was unanimously agreed to, and the secretary was authorised to proceed at once for all arrears—special reference being made to the amount due from Mr. Pickup. It was resolved that the next meeting should be made special, for the purpose of rescinding the existing rules of the company, which are of a peculiar and highly objectionable character, and adopting the customary cost-book rules. One of the present rules, which was to Messrs. Daniels and Bradwell, who had ceased to be connected with the company, provides that a secretary or captain cannot be discharged except by a special meeting, the effect being that although a captain or secretary might be dishonest the directors had no power over him. The highest opinion of the integrity of the present officers was expressed, but the existence of such a rule was considered objectionable.

At the Governor and Company of Copper Miners in England annual court, on Wednesday (Sir J. H. Pelly, Bart., in the chair), the profit and loss account showed the sum of £4907 15s. 9d. against the company, which unsatisfactory result was mainly owing to the competition in the iron and tin-plate trades, the unsettled condition of the Continent, and the threatened disruption in the United States. The liabilities of the company were lower than last year, even including a loan of 25,000l. from the bankers. The sum of 2727 1s. had been paid out of revenue for old improvements, and 437 1s. laid out in new, making the balance at present standing to the debit of this account 6155 1s. Details appear in another column.

At the Lagunazo Mining Company meeting, on March 28 (Mr. John Bethell in the chair), the accounts showed that 2655 12s. 6d. had been received in calls, of which 608 0s. 10d. remained unexpended. To provide increased floating capital the directors were authorised to call up the remainder of the capital as required, instead of 2s. 6d. every three months. The retiring directors were re-elected. The directors' report was submitted. It appears that the mines, except the Anibal, were granted to the Imperial Cobalt Company (of which Colonel Stiofop is the representative) by the original owners—Messrs. Rieken and Diaz—at a royalty of 2s. 2d. per ton; and that the property was afterwards sold to the Lagunazo Company by the lessees, on condition that the Lagunazo Company should pay the 3s. 2d. royalty, plus 25 per cent. of the net profits. It has since been discovered that the Imperial Cobalt Company had no power to sell, having failed to carry out the conditions of their contract with Messrs. Rieken and Diaz. To avoid being ejected from the mines, the directors of the Lagunazo Company were compelled to agree to deposit 1000l., to be repaid out of the royalties accruing, and to guarantee 10 per cent. of the net profits of the company to Messrs. Rieken and Diaz. To meet this latter condition the Imperial Cobalt Company agreed to reduce their proportion of profits from 25 per cent. to 15 per cent.

At the Nerubudda Coal and Iron Company meeting, on Thursday (Mr. H. Haymen in the chair), the directors' report and the statement of accounts, which have already appeared in the Journal, were unanimously adopted. Special resolutions were passed, increasing the quantity of directors to 100 shares, and authorising the issue of debentures for any sum not exceeding 20,000l., payable at the expiration of the years, and bearing an interest not exceeding 5 per cent., such debentures to have the option of conversion into the ordinary shares of the company. Details in another column.

LEADS, APRIL 4.—The Mining Share Market has remained quiet during the week, and the amount of business done has been moderate; there have been no important alterations in prices. Hedden Moor, 1¼ to 1½; Merryfield, 4s. to 6s.; Nidderdale, par; Wensleydale, 8s. to 9s.; Yorkshire, 10s. to 11s.—JOHN GLEDHILL AND CO.

The Kapunda Mining Company, on Wednesday, sold 20 tons of copper at 99½ per ton, below which price it is not their present intention to sell. The price of Copiapo ingot copper is 94½ 10s. to 95½ per ton.

The ninth annual Court of the GOVERNOR AND COMPANY OF COPPER MINERS IN ENGLAND was held on Wednesday, when it was stated that, owing to the depressed state of the iron and tin-plate trades, the company's progress during the past year had not been marked with that satisfactory result which has uniformly attended its previous operations. While this discouraging circumstance, which it has been entirely beyond the power of the executive to avert, is to be regretted, it is satisfactory to know that such steps have been taken as have rendered the undertaking better prepared than it has ever hitherto been to meet any future exigency, and that the company is in an essentially sound and safe position.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Sold on the 1st April.			
Fronech	63	£12 13 0	Sims, Williams, & Co.
ditto	63	12 11 0	Panther Co.
East Darren	112	15 3 0	Sims, Williams, & Co.
ditto	34	15 0 0	Panther Co.
Goginan	34	16 6 0	Sims, Williams, & Co.
ditto	21	17 0 0	ditto
Cwm Brynno	12	10 0 0	Panther Co.
Cwm Erfin	40	15 5 0	ditto
ditto	20	17 18 6	Bibby, Sons, & Co.
Tenders for 500 tons of Lead Ore, from the MINERA MINES, Wrexham, on April 2.			
Lot 1	100	£13 1 0	Walker, Parker, & Co.
2	100	12 18 6	ditto
3	100	13 1 0	ditto
4	40	12 18 6	ditto
5	100	12 17 6	ditto
6	40	12 17 6	ditto
7	40	12 17 6	ditto
Sold on the 3d April.			
Dyliff	66	13 5 6	Adam Eytton.
ditto	52	13 5 6	Newton, Keates, & Co.
Rhoswydol	23½	12 7 0	Walker, Parker, & Co.
Dyffrynwm	20½	13 0 6	A. Courage & Co.
Llanerchymur	25	13 11 6	ditto
Cayan	3½	10 0 0	Walker, Parker, & Co.
Laxey	100	16 9 0	Sims, Williams, & Co.

BLENDE.

Tenders for 120 tons of Blende, from the MINERA MINES, Wrexham, on April 2.	Tons.	Price per ton.	Purchasers.
Lot 1	40	£3 14 0	Vivian & Sons.
2	60	3 11 0	ditto
3	20	3 11 0	ditto
4	20	4 0 0	ditto

BLACK TIN.

Sold on the 27th March.	Mines.	Tons c. q. lbs.	Price per ton.	Amount.	Purchasers.
South Carn Brea ..	5 8 3 6	£24 10 0	£ 350 1 8	—	Carver & Co.
Sold on the 2d April.	Gr. Wh. Bury	15 3 1 19	—	1024 18 10	Biscoe Co.

COPPER ORES.

Sampled March 13, and sold at Tab's Hotel, Redruth, March 28.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
United Mines	95	£3 1 6	St. Day United.....	49	£2 18 6
ditto	65	5 3 6	ditto	44	6 3 0
ditto	56	1 0 6	ditto	43	2 0 0
ditto	44	2 7 6	ditto	25	1 3 0
ditto	43	4 12 0	North Trekerby.....	76	6 18 0
ditto	35	0 16 6	ditto	73	6 18 0
ditto	28	2 10 0	ditto	70	4 12 6
ditto	27	4 13 6	ditto	51	6 7 0
ditto	17	3 19 0	North Downs	76	7 12 0
Great Wheal Busy ..	70	2 13 0	ditto	72	10 7 6
ditto	68	2 7 0	ditto	69	7 18 6
ditto	67	2 8 6	South Crinnis	73	7 8 6
ditto	62	3 2 6	ditto	70	5 12 6
ditto	54	2 4 6	ditto	39	16 6 6
ditto	53	3 5 6	Craddock Moor.....	83	8 11 0
ditto	50	6 13 0	ditto	47	9 6 6
South Caradon	89	9 5 6	ditto	39	9 2 6
ditto	87	5 17 6	E. Crinnis & South Far	90	5 0 0
ditto	81	9 10 6	ditto	37	4 0 6
ditto	48	7 13 6	Mary Great Consols ..	74	5 11 6
ditto	45	19 18 0	Gonemena	81	6 2 6
ditto	40	18 11 0	ditto	22	4 17 6
ditto	39	6 16 0	Ferran Mines	39	3 16 0
Fowey Consols	85	7 6 0	ditto	31	5 14 0
ditto	84	6 11 0	Wheal Ellen	30	6 2 0
ditto	83	6 6 6	ditto	19	2 17 0
ditto	82	6 13 0	ditto	9	1 0 6
Tywarnhaile	80	3 16 6	Pedn-an-drea	22	4 14 6
ditto	61	2 11 6	ditto	15	10 12 6
ditto	59	3 19 6	Nancekuke	26	3 6 0
ditto	55	3 19 6	Wheal Messer	25	6 9 0
ditto	51	3 16 6	South Ellen	19	1 5 6
ditto	5	4 10 6	New South Ellen.....	12	2 13 0
St. Day United.....	73	2 18 6	Wheal Kitty.....	7	8 12 6

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Notices to Correspondents.

Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly tied on receipt: it then forms an accumulating useful work of reference.

BORING TOOLS.—Will you or one of your correspondents be kind enough to enlighten me as to the tools used in "core" boring—i.e., a boring (for wells, &c.), when a core of the rock is left? for example, take a boring of 2 feet diameter, what would be the size of the core, and how would that core be detached and raised to the surface? What form of cutting edge has the borer for core-boring? Full and minute particulars of the tools used would confer a favour on—A SUBSCRIBER: April 3.

BLACKBAND IRONSTONES IN EDINBURGH AND EAST LOTHIAN.—I observe in the Journal of last week, under this heading, a mistake as to the proprietor of the Cornish engine referred to; it ought to be "Sir George Grant Suttie, Bart., now working at Dolphington Pit, Preston Grange Colliery."—JOHN WHITELAW, Manager: Preston Grange Colliery, Prestonpans, April 2.

NATURAL OXIDE OF SILVER.—I read the letter of "Chemicus" in last week's Journal with great interest, and, bearing in mind the scarcity of silver of late years, and the large demand there is for it, especially in the East Indies and China, your correspondent would confer a benefit on the community if he would describe the process by which ore which have hitherto yielded only 13 ozs. of silver to the ton may be made to yield 113 ozs., and at an expense little more than nominal.—A BULLIONIST: April 4.

ST. AUSTIN MINERAL COMPANY.—In reply to an enquiry by "T." in last week's Journal, this company is in course of being wound-up under the provisions of the Joint-Stock Companies Act, and an official liquidator appointed. What a result, after such a flaming prospectus and list of directors!—V. M.

SOUTH DEVON IRON AND GENERAL MINING COMPANY.—Can any of your readers in the locality of the works give information as to what this company are really doing? Many of the holders, I know, would be greatly obliged by anyone living in the district giving the information desired.—ONE INTERESTED.

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THE MINING JOURNAL Railway and Commercial Gazette.

LONDON, APRIL 6, 1861.

The Board of Trade returns of the exports and imports of the United Kingdom for the two months ending Feb. 28 have been issued. They do not present any feature which was not fully expected. The decrease which they show as respects the exports was fully anticipated; indeed, the state of trade has been such since the commencement of the year, both as regards our colonies and the continent of Europe, that no other result than a considerable falling off could be expected. For the two months of Jan. and Feb. of this year we find that the total declared value of the exports of articles the produce and manufacture of this country is 16,718,419*l.*, whereas for the same period of 1860 the aggregate was 20,088,437*l.*, consequently showing a decrease of no less than 3,370,018*l.*, or equal nearly to 20,000,000*l.* on the whole year.

Of the difference between the two years the articles identified with the mining interests represent about one-fifth, which is the usual proportion in the returns generally, both as respects excess and deficiency. The total of decrease under this head is 600,274*l.*, two articles alone giving an increase—coals and culm to the extent of 31,125*l.*, and brass 572*l.* The principal falling off is shown in copper, which is 174,655*l.* less than 1860. Iron is 160,788*l.* under the amount of last year; tin, 127,826*l.*; hardware and cutlery, 88,399*l.*; steel, 49,681*l.*; machinery, 17,544*l.*; and lead, 13,078*l.* smaller than the returns for January and February, 1860.

The remarks as to the general appearance of our exports applies equally to the precious metals, which are never included in these statements. The exports again give an excess over imports; therefore, the balance is against us. We transmitted 4,986,486*l.*, and received 3,184,329*l.*, being a difference of 1,802,157*l.* Of the exports, 2,789,762*l.* were in gold, and 2,196,724*l.* in silver; and of the imports, 1,870,413*l.* in gold, and 1,313,916*l.* in silver. To the United States we forwarded 1,907,131*l.*, and received from them only 4302*l.*, which is quite contrary to custom, for under ordinary circumstances we are recipients of large amounts of the precious metal from the States, and send only a small sum; but the derangement of political and commercial matters in America has necessarily quite altered the appearance of these returns in this particular. To India and China we sent 2,018,668*l.* entirely in silver, with the exception of 133,619*l.* France took 849,535*l.* chiefly in gold, and sent 433,954*l.*, of which 289,751*l.* was gold, and 144,203*l.* silver. Australia gave us 1,360,154*l.*, and Mexico 1,257,696*l.*, without shipments from us.

Our Staffordshire Correspondent, in last week's Journal, defended Mr. BAKER, the Government Inspector of Mines for South Staffordshire and East Worcestershire, from charges brought against him by a correspondent, whose letter appeared in the previous Journal. It appears clear that the attack rested upon no substantial grounds; that Mr. BAKER did only what was his duty in giving the evidence he gave in the case referred to, and that however the counsel for the accused, as might naturally be expected, endeavoured to direct the attention of the jury to a false issue, the fact was that the accident resulted, and resulted only, from the neglect of the accused, and whether the appliances in use at the colliery were or were not "rudd," and insufficient, in point of fact they operated satisfactorily on that occasion, and formed no ground of excuse for the neglect of the engineman. We allude to this because whilst the Inspectors of Mines are necessarily open to criticism, and whilst great advantage will result from their conduct being exposed to scrutiny and question when necessary, unjust and unfounded attacks are alike unjustifiable and injurious. We are happy to hear from the district in which Mr. BAKER's duties lie that he is most active in the discharge of the duties of his office; that he is compelling the adoption of many precautions against danger, and using his utmost diligence to discourage and do away with all regulations and apparatus calculated to make colliery operations dangerous. We shall be happy to find that the result is a diminution in the accidents in that part of the country, and this result will be an effectual answer to the objections made to Mr. BAKER's appointment.

The proceedings at the meeting of the shareholders of the WICKLOW COPPER MINING COMPANY, of which we give details in another column, furnish most encouraging evidence of the great success attending mining enterprise in that favoured county. It is true that the Wicklow Copper Company is of some years' standing, and there has been time to develop much of the resources of the property, but its success has been brilliant beyond what might have been fairly anticipated at the commencement; and yet we learn, from the report laid before the meeting, that portions were quite unexplored, especially in Ballymurtagh township, where, from operations recently commenced, there is good reason to believe discoveries of other deposits, or lodes of sulphur ore, will be quickly met with. The usual raisings of ore have likewise been kept up, it is shown, notwithstanding the interruption of the ordinary works by the new operations. The net profit for the half-year amounts to 15,104*l.*, and a dividend of 2*l.* 12s. 6d. per share was declared, after making the usual deductions for the indemnity fund against bad debts, and 1602*l.* being added to the surplus fund. This dividend of 2*l.* 12s. 6d. for the half-year is on shares of 5*l.* each, consequently, at the rate of more than 100 per cent. per annum to the original

holders. This surely is proof again that mining enterprise, when legitimately conducted, is a source of vast benefit to those who invest their capital therein.

THE PROPOSED RENEWAL OF THE COAL TAX.

[FROM A CORRESPONDENT.]

It is really surprising that so monstrous an abuse as the City Coal Tax should have remained among us so long; however, we rejoice to find that public attention is at last about to be directed to this crying iniquity, which is almost as impolitic and oppressive as a similar tax would be levied upon corn imported from the same districts, for the consumption of the metropolis. It should be borne in mind that the coal duties of every description, levied in the old days by the Corporation of the City of London, were commuted in 1830 for a duty of 1*l.* 1d. per ton upon coal imported from all parts of the country (whether brought by sea or land, within the 20 miles radius of the General Post-office), and it can easily be conceived that the authorities will do their very utmost to cling to the coal tax as long as its revenues can produce such a satisfactory result as 238,873*l.* 7s. 10d. per annum, as it did, for instance, in the year 1859. According to law this impost is to cease in 1862, and the Government will strain every nerve, and use all its influence with the Legislature, to prolong its existence. This abuse has lasted long enough, as generations upon generations of aldermen have played "ducks and drakes" for upwards of two centuries with the funds originally obtained in the name of charity and the succour of the "orphan." They have beautified and improved London, as they tell us, with the money, and we know not what else they may have done with it, but it is quite time that the poor should be relieved, and that a monstrous wrong should be abolished.

Let it be remembered that the poor suffer exclusively from this cruel impost—the rich purchase their coal by the ton, and they, of course, neither feel nor care about it; but how different it is with the poor artisan, perhaps out of work, and possibly in the midst of such a winter as we have just experienced. He is compelled to pay 1d. upon every 1 cwt., or 1d. upon every ½ cwt. of coals he consumes, and at such times and in such seasons the smallest coin represents life—that is, bread. Add to this, that the tax can be levied within 20 miles of the General Post Office in every direction, the London district being 40 miles in length and as many in breadth. In the matter of tax paying, at least, it will be seen that rich and poor are alike constituted citizens of London within this vast area: their other privileges of citizenship we shall say nothing about, except that it has been their special privilege (the fortune of their ancestors and of themselves) to suffer for upwards of two centuries and a quarter from one of the most heartless and wanton extortions ever heard of in the annals of taxation. The coal consumers of London must at once unite for immediate action, and they will not only consult their own interests, but also those of the poor suffering classes, in resisting to the very last any attempted prolongation of this monstrous abuse. In the meanwhile we are glad to hear that an important movement is in course of silent but of sure organisation, and we wish it every possible success in its efforts to secure the abolition of the iniquitous and obnoxious 1*l.* 1d. tax. The first of a series of public meetings is to be held this week at the London Tavern, for the purpose of more completely laying this important question before the public. We consider that the Corporation of London has in reality abandoned 9-13ths of the tax in agreeing, at the suggestion of the Government, to hand over this large portion of it to the Metropolitan Board of Works. This is the worst part of the case. The Board of Works has shown itself utterly incompetent, and something worse; yet, in the face of this, it is to be favoured with the handling of upwards of 2,000,000*l.* of money. We are most anxious for the embankment of the Thames, the stalking-horse for this proposed monstrous renewal; but not at such a price, and to be executed in the manner it is likely to be under the control of Messrs. Thwaites and Co.

NEW THEORY ON THE COMPOSITION OF STEEL.

It is without doubt the late researches of Capt. Caron, relative to the production of steel by the metallic cyanides, that led that eminent chemist, M. Fremy, to turn his attention in the same direction, and result in the important experiments communicated to the French Academy of Sciences in its sitting on March 11, which lecture produced a profound impression on this body of learned men.

The theory is this:—Steel is not, as generally admitted, a carburet of iron, but a nitro-carbide, in other terms that iron becomes transformed into steel by its combining successively with a certain quantity of carbon and nitrogen. According to the author, there does not exist one single experiment proving practically that steel is a combination of carbon and iron. There is a very celebrated experiment, which consists of converting iron into steel by means of the diamond—that is to say, pure carbon—but this does not appear a conclusive fact to M. Fremy. He states that when the experiments for determining the action of carbon upon iron were made, other bodies than those on which it was intended to try the mutual action were present, and even the experiment with the diamond does not appear to him free from this objection, and he announces his intention of reproducing this at an early date, in order to remove all doubts. In any case, without speaking of the impurities of the melting-pots, the influence of the gases of the furnace penetrating the apparatus, the action of the nitrogen of the air, or the presence of different substances contained in the coal itself, has never been thoroughly understood. M. Fremy instances a fact, he some time since made known, that steel dissolved by acids leaves a residuum entirely different from pure carbon, but which, by its properties and composition, approaches very nearly certain cyanide productions. Thus far, both synthetic and analytic experience are far from proving that steel contains only iron and carbon.

M. Fremy began, therefore, to study successively the chemical action of carbon and nitrogen upon iron: with this object he submitted the metal to a treatment of nitrogen and carbon. He used ammonia to obtain nitrogen, and by passing a current of ammoniacal gas upon iron he produced a nitrate of iron: that some chemists, however, particularly M. Desprez, had already obtained, but which M. Fremy has more deeply investigated. The nitrogen, in combining with the iron, formed a nitrate of a grey colour, brittle, and containing as much as 40 per cent. of nitrogen. For carbon M. Fremy next made choice of ordinary coal-gas: he found that when a piece of iron at a red heat was acted upon by a stream of coal-gas (the ordinary gas used for lighting the streets), a very regular carburisation was obtained, and the metal converted into grey iron, very malleable, and to be compared in every respect to the finest brands of charcoal iron. We find, therefore, in employing ammonia and the ordinary coal-gas, two processes easy to regulate, and which may be studied singly or simultaneously. Of the action of carbon and nitrogen upon iron M. Fremy states that when iron is submitted to the action of ordinary gas, pig-iron is obtained; but when this gas is made to act on iron previously submitted to the action of nitrogen, it takes the appearance and character of steel; and a very remarkable fact here presents itself—it is, that the properties of the steel depend in a great measure on the quantity of nitrogen given to the iron. If the nitrogenising has not been continued sufficiently long, the gas, in its action on the iron, produces a substance which is in some measure intermediate between steel and iron; if, on the contrary, the metal has been suitably nitrogenised the action of the gas produces a steel of a magnificent grain. When, however, instead of operating separately with nitrogen and carbon a mixture of the two is made to act on the metal at a red heat, conversion into steel is immediate, according to the relative proportions of the two gases.

Steel, therefore, has been produced by the successive action of two gases upon iron. This new theory must throw great light on the manufacture of steel, and become of great practical utility. It will be curious to see, in a short time hence, charcoal superseded by products distilled from coal for converting iron into steel. This theory of M. Fremy has been confirmed in a striking manner by the demonstration of the existence of nitrogen in steel. In submitting to the action of a current of hydrogen gas artificial steels, prepared by himself after his new theory, M. Fremy succeeded in obtaining considerable quantities of nitrogen. After having re-obtained the nitrogen from the steels made by his new process, it became interesting to submit to the same proofs steels known in commerce for the purpose of discovering nitrogen in their composition. With this end in view, the author operated on three different, but much esteemed, varieties—the French steel of Jackson, the English of Huntsman, and the German of Krupp: these having been reduced to powder, and freed from all foreign matters, were submitted at a red heat to the action of dry hydrogen gas. In these trials the powder disengaged, during the whole time of the experiment, very notable quantities of ammonia. The last experiment leaves no doubt that nitrogen forms a constituent part of steel. Steel, concludes M. Fremy, is not a simple carburet of iron, but a nitro-carbide. It seems to me,

adds the author, that these researches ought to exert a considerable influence on the metallurgical operations that bear on the manufacture of steel. Thus, in the cementation of iron we ought to endeavour to unite all the conditions which not only carbonise, but nitrogenise, the metal. It is more than probable that the different marks of steel depend on the length of time of cementation, and also on the relative proportion of the two elements which combine with iron. In the preparation of puddled steel it will be equally important to determine the varieties of pig-iron which contain the full proportion of nitrogen necessary in the constitution of steel, or those insufficiently nitrogenised, which should receive additional nitrogen at the time of conversion. I speak now of steel, whose base is carbon and nitrogen; but this is not the only mixture in connection with the composition of iron, whose properties it is the interest of science to investigate. It is quite probable that there are certain bodies having some analogy either to carbon or nitrogen, which may produce steel. Do we not already know that the crystallised pig-iron, which is harder than ordinary iron, and somewhat resembles steel, is principally obtained by the reduction of phosphoric minerals.

[For the guidance of those interested in M. Fremy's discovery, we may refer them to the paper of Mr. Christopher Binks, as published in the *Mining Journal*, and to the inventions made public several years since by that gentleman.—Ed. M. J.]

THE OIL SPRINGS OF AMERICA.

Appended to the report of Mr. T. W. Kennard, C.E., upon the prospects of the Atlantic and Great Western Railway (which has just been issued to the shareholders, and is of a most encouraging character), are some very interesting particulars concerning the oil springs of Pennsylvania. Mr. J. J. Shryock, one of the directors of the railway in Pennsylvania, writes that he has got all the information he could without a visit to each well; he has endeavoured to get it from reliable parties, and he thinks it can be depended on. In the Mecca oil regions, Ohio, he has ascertained that there are now 1200 wells pumping, and in a state of progress. The average daily clearing is 300 barrels, worth 20 cents per gallon, without barrels. This oil is not so good for burning as the Titusville oil, but is a heavier oil, and is used successfully for lubricating by simply filtering it. The Oil Creek oil is principally marketed at Titusville, at from 22 to 25 cents, according to quality. There is quite a difference in the wells; some shallow wells having produced a much heavier oil than the deeper ones. In winter the oil does not separate so freely, but the obstacle is removed by the use of steam. In the month of March, one firm, the heaviest purchaser, bought 5000 barrels, and in three months paid \$17,500 for carriage. There are no pumping wells above Utica, on French Creek, some six miles above Franklin, the borings not yet being of sufficient depth. All wells that have got down 600 feet are pumping from 10 to 40 barrels in 24 hours.

In the Clapp Place district, fifteen companies are at work, and the indications for oil are good. The Complanter's Oil Company pumped 800 barrels from their well in about three months; the veins of oil then appeared to become choked, and they are at present drilling deeper. In the McClintonville district eighteen companies are at work, large quantities of oil being produced. In the Rouseville district nineteen companies are getting good quantities of oil, and the appearances in other localities are equally good. In our next we shall give some interesting particulars concerning the history of Coal Oils.

THE UNITED STATES COAL TRADE.

From an elaborate statement, published in the *United States Railroad and Mining Register*, we abstract the following particulars relative to the Coal Trade of the Union. The coal is lavishly diffused among the States from Pennsylvania to Arkansas, and from Ohio to Iowa and the territories. The nearest estimate that can be formed shows that the aggregate production for 1860 was nearly 15,000,000 of English tons: thus—

Eastern Pennsylvania.....Tons	9,011,389
Western Pennsylvania.....	2,229,808
Ohio (as per Governor's estimate).....	1,920,000
Estimates for other States.....	3,500,000=16,661,197
Equal to English tons.....	14,876,042

The 8,500,000 tons of anthracite coal mined in Eastern Pennsylvania—more than half the whole quantity of coal mined throughout the Union—are consumed in the eastern counties of the State, in the cities of Philadelphia and New York, and in the seaboard cities and towns between Maryland and Maine. And if we take the aggregated population in the anthracite markets, and compare it with the remaining portions of the country, there being 31,000,000 of inhabitants in the Union, we may conceive what the consumption of coal will amount to when it shall supersede wood as the preferred fuel in the southern and western States, as it has already become the popular, because the best, fuel along the sea coast. The coal trade of the United States with foreign nations, like the home coal trade between the States, exhibits an increase which gives assurance of large results in future years. The coals exported are almost exclusively anthracite, the product of the mines of Pennsylvania. It is only forty years since the tabulations of the anthracite coal trade commenced with 365 tons for the year 1820, and now, for the year 1860, the tabulations of anthracite forwarded to market show an aggregate exceeding 8,000,000 tons. With regard to the yield of the anthracite coal fields of Pennsylvania, it appears that the—

Southern Coal District, comprising the Schuylkill, Pine Grove, and Lykens Valleys, contains.....75,950 acres
Middle Coal District, comprising the Lehigh, Trevorton, and Shamokin Regions, contains.....85,525 " " " "
Northern Coal District, comprising the Wyoming and Lackawanna Regions 76,505 " " " "
Equal to 238,280 acres. As to the coal mined in Ohio, Governor Denison in his annual message, dated Jan. 7, puts down the yield at 48,000,000 bushels. Allowing 25 bushels to the nett ton of 2000 lbs., the quantity estimated is equal to 1,920,000 tons. This is below the quantity estimated for previous years by other authorities, partly upon actual returns and partly upon conjectures, and may be relied on for as near an approximation to the real quantity mined as it is possible to obtain.

ALUMINIUM AND ITS ALLOYS.—In the Exhibition of Manufactures now open at the Society of Arts are some very valuable specimens of aluminium and aluminium bronze, manufactured by Messrs. Bell Brothers, of Newcastle-on-Tyne, of which the exhibitors give the subjoined description. The specific gravity of aluminium is 2.5, or about one-fourth that of silver, and thus, weight for weight, the bulk of aluminium is four times the bulk of silver. It does not tarnish by exposure to the air, has no perceptible odour or taste in the mouth, is malleable, can be forged, either hot or cold, equally well with gold and silver, and rolled into thin sheets or leaves; is ductile, so as to be capable of being drawn into fine wire. It further resembles silver in elasticity and tenacity, and, when cast, in hardness. When hammered, it takes the character of wrought-iron, with elasticity and considerable rigidity, sounding like steel when let fall on a hard body. It is extremely sonorous, and Mons. Lissac has made tuning-forks of it, which act extremely well. It melts at a temperature a little above that of zinc, and considerably below that of silver. Aluminium may be readily run into moulds, and when heated to a high temperature in the crucible loses none of its weight. From experiments made by M. Deville, he deduces the power of conducting electricity to be eight times that of iron; and as a conductor of heat it stands high amongst metals. According to this chemist, water, whether hot or cold, has no action upon the metal, even at a red heat near the point of fusion. It is, however, slowly oxidised when steam is passed over it at a white heat. Sulphuretted hydrogen has no effect upon it, nor has sulphur itself, so long as the metal is not heated higher than a red heat, though at a higher temperature they combine, forming sulphide of aluminium. Sulphuric acid so diluted as to attack metals which ordinarily decompose water, has no action upon it whatever; and, according to De la Rive, the contact of a different metal, as in the case of pure zinc, does not help to dissolve the metal. Nitric acid, weak or strong, at the ordinary temperature does not act on it, but when boiling it slowly dissolves it. Hydrochloric acid, whether weak or strong, is the true solvent for aluminium. Alkaline solutions have an energetic action on it, but caustic alkalis have no effect upon it, even in a state of fusion. Ammonia exercises a feeble action. The organic acids, such as vinegar, tartaric acid, &c., have little or no action on it. The effect, however, of a mixture of vinegar and salt is different, for in this instance a small amount of hydrochloric acid is set free, which acts on the metal, but even this action is extremely slow, much slower than on tin. The salts of tin, too, have a strong flavour, whilst the salts of aluminium are less in quantity, and have little or no flavour. Deville considers that the action of sea water on aluminium is decidedly less than on copper. It can be gilt or plated by galvanic agency, but acid instead of alkaline solutions must be used. A coating of copper may in like manner be given. The effect produced on it by saliva is very slight, scarcely perceptible, even when the metal was kept for a long time in the mouth. Up to the present time no solder for joining it has been found which is satisfactory, though it is stated that M. Mourry has succeeded in this object, but his process is not known. M. Hulot has proposed to effect this object by covering the surface with a deposit of copper, and then employing the ordinary solders. The solution of this problem would tend much to bring the metal into general use. The alloys of aluminium and copper forming what is termed aluminium bronze, are remarkable. It is a perfect chemical combination, and has no tendency, as is the case with ordinary alloys, to separate under the influence of heat. These proportions represent an exact number of chemical equivalents of the two metals. Aluminium bronzes are of a yellow or orange colour, closely resembling gold, and take a fine polish equal to that of steel. The chemical properties are the same as those of other copper alloys. In tenacity they fully equal steel. Drawn into wire of No. 16 gauge, the breaking strain of copper, according to Mr. Gordon, was 190, of iron 280, of aluminium bronze 434, showing a strain of 24 kilos, to the square millimetre.

Good French iron, in Deville's experiments, broke at a strain of 60 kilos, the square millimetre, and steel wire at a strain of from 90 to 100 kilos. It thus appears that steel, and that of a fine quality, only can stand a comparison with aluminium bronze in respect of tenacity. As regards hardness, a comparison was made between a steel and a bronze groove for the guide blocks of a locomotive engine, and, after six months' use, no trace of wear was perceptible; the bronze gave a result equally good with the steel. It was also tried for the journals of the front wheel of a locomotive, with excellent results, its great malleability, combined with hardness and tenacity, rendering it well adapted for this purpose, where ordinarily a very brittle alloy is used. The bronze containing 10 per cent. of aluminium can be rolled at all temperatures, from cold up to a bright cherry red. It rolls well at a bright red heat, breaks less and elongates more than pure red copper. It is difficult to roll cold, and after a number of passes through the rolls it elongates no further; it is then necessary frequently to re-heat it, as it hardens rapidly under the rolls. It is desirable to roll it at as high a temperature as possible, short of fusion. Re-heating and plunging in water to cool, renders the alloy more tractable than simply re-heating without dipping. If re-heated to a bright red heat, and not dipped in water until it has been left to cool in the air down to a low red heat, it is sufficiently malleable and ductile, when cold, to bear without breaking the ordinary manipulations in working it, except some descriptions of stamping.

ON PLATINUM.

At the Royal Institution of Great Britain, Prof. FARADAY founded a discourse on the recent investigations of MM. Ste. Claire-Deville and H. Debray, regarding the characters and conditions of the platinumiferous metals, and the new process of working the ore which they have established on their results. Wherever platinum occurs it is usually, if not always, accompanied by five other remarkable metals—ruthenium, osmium, iridium, rhodium, and palladium; and in addition by other substances, as iron, copper, gold, silver, and sand. Being washed, the heavy particles are left as the general ore of platinum, this metal constituting by far the largest part of the substances.

The six metals, when obtained apart and purified, form two groups of three each, each group having an equivalent number very different from that of the other group, as appears in this table:—

Equivalent No., 95.5.	Equivalent No., 53.
1. Osmium.....Sp. grav. 21.40	2. Ruthenium.....Sp. grav. 11.3
3. Iridium.....".....21.15	4. Rhodium.....".....12.1
5. Platinum.....".....21.15	6. Palladium.....".....11.8

The three in the first group have the same equivalent number and nearly the same specific gravity; but osmium takes the place of platinum as the heaviest of bodies. The equivalent number of the second group is alike for all, but it is little more than half that of the former group. The specific gravity also of the group is little more than half that of the former group; from which it results that an equivalent of any of these will have very nearly the same volume as an equivalent of any one of the heavier group.

There are certain analogies between 1 and 2, 3 and 4, 5 and 6: platinum is more like palladium than like the other metals. These numbers also represent the order of fusibility. Osmium has not as yet been fused; the rest have, in the order given. Platinum appears among them as a comparatively easily fusible metal. They are all volatile at very high temperatures, even osmium disappearing whilst the mass remains solid.

The platinum has usually been obtained from these ores (after they have been well washed, sifted, and mechanically freed from the adhering matter) by the solution of the galena, the platinum and other metals are taken possession of by the lead, and when the action is well effected the access of air is adjusted until the remaining part of the sulphuret is decomposed, and only platinumiferous lead left at the bottom part of the crucible, or furnace, with scorification upon it. The former is separated, and then heated, exposed to air until much of the lead is oxidised, which, escaping as litharge, leaves at last an alloy of lead and platinum, containing not more than 10 or even 5 per cent. of lead. Such an alloy of platinum requires a very high temperature to fuse it, and this is, therefore, attained and applied in furnaces constructed of chalk-lime, heated by the insertion of gas blowpipes. The heat first melts the alloy, and being combined with oxygen in a little excess, the remaining lead is rapidly oxidised and dissipated in fumes, and then being raised and continued, any gold, copper, camium, or other metals, except iridium and rhodium, are also converted into vapour and driven off. The platinum remaining is at last heated to a still higher degree, and is either cast into flat cakes or granulated; and this has been done with quantities weighing even as much as 40 lbs.

The resulting metal contains some iridium and some rhodium, being, in fact, an alloy of platinum; but it is an alloy which, being harder than platinum, and even less liable than it to the chemical action of acids and other chemical agents, is as useful as the pure substance in the ordinary applications of the metal. As iridium and rhodium have no employment at present better than that of alloying platinum, their quantity has been purposely increased until it has made up as much as 25 per cent. of the mass.

A mixed process has been devised by MM. Deville and Debray, which gives a platinum purer than any hitherto obtained. It is then as soft and ductile as silver. But for this process, for general directions and minute particulars, and for most interesting matter about all the metals of the platinum group, the reader is referred to the fifty-sixth and sixty-first volumes of the "Annales de la Chimie."

OBTAINING MOTIVE-POWER—THE HYDROSTATIC PARADOX.—An invention based upon the pressure which liquids exercise according to their density, and the dispositions which are given to them, has been provisionally specified for Mr. Louis Leygoine, of Limoges. The effects which a small quantity of liquid will produce when contained in a vertical tube, the lower end of which rests in a basin or reservoir scarcely more than 1 inch in height, but of a surface 10,000 times greater than that of the small tube, are very extraordinary. Supposing, for example, that the small tube be 1 in. square, and the basin 10,000 square inches in surface, if the basin be filled with mercury through the top of the tube, and the operation continued until the mercury is 3 ft. high within the tube (calculating from the bottom of the basin), the bottom of the basin will support a pressure of not less than 26 tons weight, although to arrive at this result but 20 to 25 quarts of mercury have been expended. To employ this natural agent as a motive-power is the object of this invention, and it has been found necessary to construct an apparatus, which, arranged to engender enormous pressure, must also possess within itself the means of destroying this pressure, and reproducing it without manual assistance. The apparatus consists of an oblong square case of about 4 yards in length and 4 ft. 8 in. in depth and width, and within this case are contained the parts which, by their arrangement, and the aid of a liquid of any description, engender a force proportioned to the dimensions of the apparatus and the density of the liquid. These parts consist, firstly, in two hollow pistons, each having about 1 square yard of surface, and a height of about 6 in.; each of these pistons is provided in the interior with a small apparatus, acting at given moments as valves, and preventing in turn (by the facility which they possess of sliding up and down) and intercepting the communication between the mercury in the tubes hereinafter mentioned with that contained in the pistons by openings in the sides of two pistons in juxtaposition to those already mentioned. The above-mentioned tubes are solidly fixed to the pistons. To set the apparatus in motion the two pistons and the above-mentioned tubes should be filled to the top with mercury, and the mercury in the left tube is in communication with the mercury in the piston, and that then this latter must support a pressure proportioned to the surface of the interior void, which is about one square yard, and of the height of the mercury in the tube, which makes about 3 yards of vertical height (calculating from the centre of the said tube), and finally to the density of the mercury, which will give, according to calculation, a pressure upon the piston of not less than 81,000 lbs. By this statement it will be understood that the piston must be pushed from right to left until it meets a cross-piece, but two small tubes placed at the end of the rods connected with the lozenge-shaped valves before mentioned meet the cross-piece sooner than the piston, and then by the facility which they possess of sliding between the sides of no piston they will be pushed from right to left, and by their movement will force the valve to mount to the upper part of the piston, which will have the result of destroying this enormous pressure by intercepting the communication between the mercury in the tube and that in the piston; but at the moment this pressure is destroyed in the left piston it will be established in the right; thus, two cross-pieces unite the two pistons, and as the left piston arrives at one cross-piece, the two heads of the rods of the right-hand apparatus open a communication with the mercury by lowering the valve, and the piston on the right is submitted to the same pressure as was previously exercised on the left, and effects the same results, that is to say—that the right-hand piston will descend on to one cross-piece while the left piston will go to the other, and vice versa, as long as may be required.

BORING AND WINDING FOR MINING PURPOSES.—Some improvements relating to the arrangement and construction of machinery or apparatus for effecting the boring operations required in mining by means of steam-power in lieu of manual labour, have been provisionally specified by Mr. James Hunter, of Colinton, near Edinburgh, Scotland. Under one modification the arrangement consists of a portable or locomotive engine constructed with double cylinders, arranged on the upper part of the engine, the piston-rods of which are connected to and give motion to a horizontal crank-shaft, the bearings of which are carried in brackets fixed to a convenient part of the engine or its framing. This shaft has keyed to it a pinion, which gears with a spur-wheel carried upon a horizontal shaft, having its bearings arranged on a separate frame contiguous to the engine. The spur-wheel shaft has upon it a cam, or series of cams, arranged parallel to each other, and fitted so as to be readily moved to and fro on the shaft. Immediately in front of this arrangement is the framing which supports the lever for imparting the vertical percussive motion to the boring rod. The back end of this lever extends within reach of the cam, so that when motion is communicated thereto from the engine, the end of the lever is depressed each time the cam comes round, and a corresponding rise and fall is imparted to the boring tool. Where a differential cam is used, the height to which the boring rods are raised is regulated by moving the cam along the shaft, so as to bring a longer or shorter projecting part opposite the end of the actuating lever. In addition to this adjustment there is fitted to the lifting lever of the boring rods box, capable of adjustment along the backward portion of the lever. A weight is placed in the box, so that by adjusting its position on the lever nearer to or away from the fulcrum, the force of the blow may be regulated to a nicety. The rotary motion which is required to be imparted to the boring rod is effected by a hand-crank, and by its movement will force the crank shaft of the engine has upon its laterally projecting extremity a cam, which gives motion to a compound lever arrangement for giving the percussive movement to the boring rods. The cam depresses a lever, the free end of which is linked to the backward extremity of the lever to which the boring rods are hung. These levers are so arranged that the rise and fall of the front end of the lever is multiplied in any desired proportion. The backward end of the actuating lever is screwed, and it works through an internal screw, to which the upper extremity of the link that connects the two levers is attached. A winch-handle is fitted on the extremity of the screwed lever, so that by turning this handle the screw portion of the lever may be lengthened or shortened without stopping the motion of the engine. For the convenience of raising or lowering the boring rods a winding barrel is fitted closely on the crank shaft; the

barrel is caused to rotate with the shaft by means of a coupling, which slides to and fro on a feather formed on the shaft. With these arrangements the operation of boring is effected in a very rapid and economical manner, as compared with the ordinary mode by hand labour.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

APRIL 4.—The week before the quarterly meetings of the Iron Trade is usually slack; buyers, except when the market is rising, are indisposed to purchase until the quarterly meetings. These take place next week at Wolverhampton and Birmingham, and there is a disposition on the part of some people to anticipate an improvement. Whether this will actually be experienced or not it is impossible yet to say, but at present the trade is very dull, and can scarcely be worse. The workmen in many parts of the district are only partially employed, and considerable suffering prevails. The amount of relief given is very greatly in excess of that which was being bestowed at the same period of last year. A further reduction of the make of pig-iron is being effected by blowing out additional blast-furnaces, and this appears the only course by means of which the supply can be reduced to the demand, and the present unremunerative price of this class of iron strengthened.

In the Hardware Trades of Birmingham, Wolverhampton, Walsall, and South Staffordshire generally, there is very considerable depression, which appears rather to increase than diminish. The unfavourable weather is casting a gloom over the prospects of the next harvest, and tends to add to the distrust which the uncertainty of the maintenance of the peace of Europe and the aspect of American affairs inspire.

The horse-nail makers have gone in at the former rates, having abandoned the insane attempt to obtain an advance at the present juncture. But the original cause of the strike remains, and the men refuse to work, for two masters employ men not the sons of operatives in the trade. Hitherto the masters have assisted those employers to resist the demands of the men by supplying them with nails, but they threaten if the men do not go in to cease supplying the iron to other men, and give the men to the 13th inst. to consider the course they will take.

In North Staffordshire a reduction of 10 per cent. in the wages of miners was resolved upon at the quarterly meeting, owing to the depression in the iron trade.

Three proprietors of mines were the subjects of informations by Mr. J. P. Baker, the Government Inspector of Mines in this district, before the stipendiary magistrates at Wolverhampton, on Wednesday. Mr. W. Roberts, ironmaster, of Tipton, was charged with having no break attached to the winding apparatus of his colliery; Mr. W. Harrison, mine owner, of Brownhills, near Walsall, was summoned for not having a steam-gauge to a boiler, nor a break to his winding apparatus; Messrs. Aston and Shaw, of the Cockshut Colliery, near Wolverhampton, were charged with neglecting to provide steam-gauges to two of their engine-boilers, and a break to the machinery for winding. All the defendants pleaded guilty, and the magistrates inflicted a fine for each several offence of 40s. and costs.

REPORT FROM NORTHUMBERLAND AND DURHAM.

APRIL 4.—The Coal and other trades here continue as last reported. The home demand for coal, iron, &c., is good, particularly on the Tyne, where all the iron-works, engine manufacturers, &c., are well employed. The works of the Tyne are celebrated over the world, so that the demand for engines of all kinds is very good, and many large orders are also in for iron bridges and similar constructions. At the works of Sir William Armstrong, at Elswick, much activity prevails both in the making of hydraulic engines and also in the manufacture of ordnance. A large number of men are now employed at these works, and the buildings connected with them, together with the numerous dwellings and streets for workmen, &c., have added a large suburb to the town of Newcastle.

On Thursday last the large winding-engine we have noticed formerly was started at the Forster Pit, Seaton Delaval Colliery. The engine was designed by Mr. Marshall, the engineer of the company, and constructed by Mr. Horsley, of the Hartley Engine-works. The engine consists of two cylinders 36 inches in diameter, with a stroke of 6 ft. The weight of the main shaft and cranks of wrought-iron is 11 tons 13 cwt., and the two rope rolls are each 25 ft. in diameter, and weigh 44 tons. When in full work the engine will lift 72 cwt. of coals in 25 seconds, from 120 fms. deep, while the rolls are making 6½ revolutions. The peculiarity of the engine is that the two cylinders are worked by double mitre valves, instead of ordinary steam-slides; and their gearing, which consists of link motions, same as used by locomotives, is regulated by eccentrics attached to the main shaft. The engine is under the most complete control of the engineer, who can in a moment start, stop, or reverse it. The house in which the engine is situated is a most substantial piece of masonry. The gearing outside will be a novelty in the trade as well as the engine, as iron shafts and gears are to be erected instead of wood framing, as formerly. The pulleys will be of wrought-iron, and 20 ft. diameter. The whole establishment is on the most gigantic scale, and forms an era in the progress of coal mining. The quantity of coal the engine will lift per day will, of course, be enormous; perhaps more than any other engine yet erected, as the engine is a large one, and the depth of the shaft certainly not great. Taking the rate given (say) 5 tons per minute=300 tons per hour and 3600 tons per day of 12 hours, this would require 360 scores, at 10 tons per score; and as 950 men would be required to get that quantity of coal, that number of coal heavers alone would be required. It appears, therefore, highly improbable that the engine will ever be fully employed; at any rate, very extensive workings will be required to effect this.

The Rosedale Branch Railway was opened on Wednesday week for traffic. This line connects the celebrated Rosedale Iron Mines with the North Cleveland Railway. It is confidently expected that the introduction of the Rosedale ore to the use of the manufacturers will form an important event to the iron trade in this locality, not only as a means of economising the cost of making pig-iron, but because of the superior quality which it is expected to yield for both foundry purposes and for malleable iron making.

It is with much regret we record the sudden death of Mr. Thomas John Taylor, of Earsdon, which occurred on Tuesday morning last at Beilsham. He was one of the ablest mining engineers in the North of England, and held several important appointments. He was mining engineer for the Duke of Northumberland, and, as one of the vice-presidents of the Northern Institute of Mining Engineers, took a warm interest in its success, to which he also largely contributed by his writings and general exertions. Mr. Taylor's latest work was the scheme for the "Drainage of the Tyne Collieries," which he had entertained for many years. He was the life and soul of this admirable scheme, and his loss will be severely felt by its promoters, as it will also very generally be in this and other parts of the kingdom in mining and commercial circles. Apoplexy was the immediate cause of his death.

A general meeting of the Northern Mining Institute is to be held to-day, when then following papers stand for discussion:—The President's paper, "On the Accident at Heston Colliery;" the papers of Mr. Armstrong and Mr. Daglish, "On Underground Furnaces, and Furnace Action;" and Mr. Watson's paper, "On Cement Winding." Some account of the proceedings will be forwarded for next week's Journal.

A fatal accident occurred at the Sheriff Hill Colliery to a deputy named John Brown. From the evidence given at the inquest it appears that he had taken some timber out of one of the working places, and removed it to the face of the work early on the morning in question, and shortly after the men commenced to get coal they found that the place was in an unsafe state, owing to the strata above giving way. They sent for Brown, and he put one prop under the stone, but was obliged to retreat, and might have got safely out but, unfortunately, he returned to get his tools out, and was caught by the stone falling and killed on the spot. He was a very steady and experienced man, and much respected by all who knew him. A verdict of "Accidental Death" was returned.

A fatal accident also occurred at the Coxhoe Colliery, on Wednesday week. The horse-shoer, named Horton, aged 31, went down the shaft to look at the horse, and told the engine-driver that he was going to the bottom of the shaft; however, when he reached the five-quarter seam, 24 yards from the bottom, he attempted to get out, and as the cage was in motion it caught him, and he was precipitated to the bottom. He received such injuries as caused his death shortly afterwards.

REPORT FROM MONMOUTH AND SOUTH WALES.

APRIL 4.—As usual at holiday seasons, there is little opening for observations upon business matters, which during the week may be said, in market phraseology, to have "ruled dull," or, at all events, to have shown no alteration, each branch remaining in its relative position. There are, however, one or two facts connected with the district which may be interesting to those connected with it. The important works of Pen-y-darrian are still silent; but the opinion is entertained by some persons that they may yet be put into operation when certain agreements expire. With reference to Hirwain, the stoppage of which has so sadly reduced the once flourishing settlement of that name, the rumour is revived of the formation of a company, some of them men of capital and influence, to resume operations. In the Swansea Valley, Messrs. Morgan and Lewis are sinking a large pit to a valuable vein of bituminous coal, and it is calculated that towards 1000 tons of coal will be raised daily. The outlay is expected to be at least 30,000l. Messrs. Gilbertson and Co., late of Cwmavon, have purchased the Pontardawe Tin-works.

At the Glamorganshire Assizes, a case which occupied a considerable time, was heard—Lawrence v. The Trustees of the Marquis of Bute. The *Swansea Gazette* of yesterday has the subjoined remarks upon it:—"The result of the recent trial at Swansea, which has been restored to the Lawrence family of Pontypool the part of the mountain in Cwm-sa-fwrch, claimed by the Marquis of Bute's trustees, is likely to be very important, as the colliery opened by Messrs. A. Buchan and Son stands on a part of the ground recovered by this important three days' trial, and of course it will depend now upon a new arrangement with the Lawrence family whether the colliery is to continue working or no. If we are rightly informed, the Messrs. Buchan have for some time given up the coal to the Rhymney Iron Company, and in the present state of trade, when manufacturers are looking to the sale of coal to reimburse them for losses in the make of iron, it is of great importance that the coal supply should be as productive as possible. There is another point of view under which the question may be regarded—as bearing on the interest of the Rhymney Railway, and the negotiation with the Bute trustees for the leasing of the whole line. We hope, therefore, in the interests of all the parties concerned, that there will be no difficulty in the settlement of this important matter."

The week's exports from Swansea were about 6000 tons of coal, 900 tons of patent fuel, and 3160 cwt. of copper, for Havre. Among the cargoes arrived were—From Tortorillo, 680 tons of copper regulus and 40 tons of copper ore, for Henry Bath and Son; from Caldera, 88 tons of copper ore, 50 tons of regulus, 5 pieces of copper, and 228 tons of silver ore, for Henry Bath and Son; from Marcellino, 163 tons of copper ore, for W. Jones; from Virgin Gordon, 141 tons of copper ore, for Richardson and Co.; from Charles quimbo, 460 tons of copper ore, and 40 tons of unwrought copper in pigs, for Charles

Lambert. As an instance of the facilities for loading at this port, it may be mentioned that a few days since no less than 618 tons of the Aberaman Company's coal was put on board a screw-steamer within eighteen hours. Freight generally indicates a rise.

Trade has somewhat revived at Cardiff, the changing winds having emptied and again refilled the docks. Among the arrivals was the *Helena Stewart*, an American, of 2000 tons burden, the last vessel chartered to the States under the old tariff. Of iron exports are—For Trieste, 104 tons of bar and bundle, by W. Crawshaw; for Vigo, 3 tons of bar, by Insole and Son; for Rotterdam, 100 tons of sheet, by Booker and Co.; and 100 tons of bar, by A. Hill; for Lisbon, 10 tons of plates and 267 tons of rail, by E. Price; for Coquimbo, 502 tons of rail, by Guest and Co.; for Genoa, 178 tons of rail, by the Lynvi Vale Company; for Pernambuco, 301 tons of rail and 15 tons of fish, by the Aberaman Company; for Bath, United States, 593 tons of rail, by the Rhymer Company; for Naples, 214 tons of bar and bundle, by the Rhymer Company, and 280 tons of bar by E. Hogg. About 20,000 tons of coal were shipped foreign, the largest cargoes being 610 tons for Venice, by Powell and Son; 600 tons for Tarragona, by Page, Olsen, and Co.; 820 tons for Havre, by H. Worms; 680 tons for Genoa, from Lettly Shenkin; 650 tons for Lussina, by Powell and Son; 660 tons for Genoa, by the Rhymer Company; 660 tons for Malra, by Fothergill and Co.; 753 tons for Malta, by D. Davis; 580 tons for Barcelona, by Page, Olsen, and Co.; 543 tons for Alicante, by Insole and Son; 570 tons for Malta, by the Rhymer Company.

At Newport things are still looking dull. Llanelly is doing a quiet trade.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

APRIL 4.—The Iron Trade still continues languid, but there are no indications that the depression has increased. The ironmasters, at their preliminary meeting, have declared their adherence to the old scale of prices, and we hear that this course was the most judicious under the circumstances. The accounts brought from the States by the last mails are a little more encouraging, but the effect of the Tariff Bill will prove, as was anticipated, very prejudicial to our British ironmasters. The metal trade of Sheffield is unusually depressed, owing to this bill, coupled with the high rate of interest charged by the banks. The demand for ship plates is very active, and a large number of orders have been received from Government and private shipbuilding firms. There is also a good enquiry for rails, railway wheels, and axles, at Rotherham, and in two other districts of Yorkshire. It is estimated that there are nearly 30,000 weavers out on strike in Lancashire, which is producing great depression in other departments of the general trade of the county.

We have to report a steady and increasing demand for coal, particularly the hard kinds, which are used for steam purposes. The substitution of this material for coke has given a great impetus to the demand from different railway companies, and much is also required for shipping. Indeed, the demand more than doubles the production. The South Yorkshire and Manchester, Sheffield, and Lincolnshire Companies are now carrying a large quantity of mineral over their line, which is proving already the wisdom of the two companies in amalgamating; and as they have now direct access to the great coalfield of South Yorkshire they are carrying immense quantities to market, which were hitherto inadequately supplied.

A very interesting case, and one that occasioned much excitement amongst the colliers, was heard at the County Petty Sessions, at Chesterfield, on Saturday, before Messrs. E. G. Maynard, Godfrey Heathcote, Bernard Lucas, and J. Paget. It was a charge preferred by Mr. John Carr, colliery manager to the Dunstan and Barlow Company, against three colliers, named John Wright, Wm. Dodd, and Benjamin Lomas, for having unlawfully absented themselves from the service of the company. Mr. Robert Carr, the manager's son, who appeared to support the informations, said the three defendants applied to his father for work on March 5, and they were engaged. They absented themselves the same day. The defendants said they were all from South Staffordshire, and they applied for work and were promised it; they also signed the rules, but did not commence work, as they could not afford to allow a week's earnings to be kept in hand, each having a family to support. The magistrates asked if the company would not "sub" them. Mr. Carr replied in the affirmative. The defendants said they were willing to go back if the company would pay them without stoppages. The book which the defendants had signed was here produced, and after it had been examined by the magistrates Mr. Maynard said: "The agreement you make them sign is worth nothing at all. These men do not enter into a written agreement to serve you, and if they leave before they go to work you have no hold of them. Unless they sign a written agreement certifying that they are willing to serve you, or enter into your service without it, we cannot deal with them if they leave their work." Mr. Carr said the magistrates had committed men who had signed no more than appeared in the books. Mr. Maynard: "The agreement which these men sign only certifies that they have received a copy of the rules, and promise to obey them. That is not a contract to work. I have signed commitments against your men for leaving your service, but will do it no more under that form. If you will get them to sign an agreement that they are willing to serve you, we can deal with them. If you were to put in the document 'we the undersigned agree to serve you, and have received a copy of the rules; that might do. Point out to me any part of the rules where these men have agreed to serve you.' Mr. Carr admitted that he could not. The magistrates then discharged the men from custody. The decision in this case is causing other collieries to revise the memoranda which the men have been required to sign.

The greatest interest was created in Barnsley, on Tuesday, amongst a large body of colliers, in consequence of a charge of conspiracy and intimidation being preferred against seven of the turn-outs at the Woolley Colliery, near that town. These names are Wm. Fell, George Beumont, Joseph Beumont, John Scalf, Joseph Kliner, Matthias Ramsden, and Jesse Goodier. The magistrates were Mr. T. Taylor and Col. Daly, and the prisoners were charged under the Act Geo. IV., entitled an Act to repeal the laws relating to the combination of workmen, &c., which enacts, "That if any person shall by threats or intimidation, or molestation, or in any way obstruct another by force, or endeavour to force any journeyman, &c., to depart from his hiring, employment, or work, or prevent any person from hiring himself, is liable to a term of imprisonment or commitment for trial." Mr. Middleton, barrister, of Leeds, supported the charge, and Mr. W. P. Roberts, the colliers' attorney-general, appeared for all the defendants. The evidence was exceedingly lengthy, but the following summary embraces all the material facts. The Woolley Colliery has been in operation nearly eight years, and in consequence of the difficulties the men had to contend with, the proprietors had paid a higher rate of wages than their neighbours. These difficulties being overcome, they had proposed a reduction, which the men had refused to accept, and one of them, Wm. Fell, said: "You will have another Oaks job," referring to the riots and disturbances connected with that strike. The men had given notice, but left before that had expired, and they were ejected from their houses. On Monday, March 25, about 70 men who had been engaged in the district came to the colliery, the company having paid their fares, but the turn-outs succeeded in intimidating them, and they were sent back into Staffordshire. The case was adjourned until Friday, for the production of the books of the Miners' Union.

A new branch of trade has been introduced into Sheffield by Messrs. John Brown and Co., at the Atlas Steel and Iron Works, who have been entrusted by Government with a very large contract for the construction of the iron plates for the armour-clad war ships. These plates have hitherto been made at the Parkgate Iron-works, and this is the first introduction of the manufacture into Sheffield. No plates of anything like the size have heretofore been made in Sheffield, and the process is an interesting one. An enormous furnace is erected, in which the iron is heated into a molten mass, and thence conveyed by steam power in a truck on a tramway to the rollers, between which it is drawn out to the proper size and consistency. Previous to this, however, the metal had to undergo elaborate processes. Originally each plate consists of 96 pieces, each about 1/4 in. thick, and these are welded together one after another till they form either two or four solid lumps. In this state they are put into the furnace, and a higher rate of wages comes out from between the rollers it is only 1/4 in. thick. The power of resistance of such a dense mass of metal must be immense. Of course, the iron used is the very best. At the first experiment a plate 8 ft. by 6 ft. was made, weighing about 3 tons. It was perfectly successful, and so satisfied was Mr. Brown with the result, that he is prepared to send this plate up to Government to be tested, although it was the result of a mere experiment, and the first plate of such a size made in the town.

MINERS' ASSOCIATION OF CORNWALL AND DEVONSHIRE.—On Tuesday evening Captain John Prince, of Camborne, delivered a lecture at the Institution, Camborne, "On the Use and Abuse of Safety Fuzes in connection with Blasting." He described the old mode of blasting by means of the rush, and of the subsequently improved method by the use of quills, which became quite general before the application of the safety-fuze, invented by the late Mr. Bickford. The dangerous practice of these old methods were pointed out and illustrated. He then described the introduction of the safety-fuze by the late Mr. Bickford, and the subsequent improvement in its manufacture; and now so universal has the practice become, that in all districts where the operation of blasting is performed safety-fuze is applied. The different modes of blasting adopted by miners, the varieties of tamping, and tools which were formerly and which are now used, and the different kinds of rocks in which blasting is applied, and its variety of effects under different circumstances, were described, as were also the causes which produce accidents, causing too frequently broken limbs, blindness, and death, which might be prevented by the use of proper precautions on the part of the miner, which were pointed out by the lecturer. An animated discussion took place after the lecture, when many of those interested in mining expressed their desire that Capt. Prince would favour them with another lecture on the same subject. A vote of thanks was unanimously given to Captain Prince for his lecture.

MASTERS AND WORKMEN.—The interesting paper, "Masters and Workmen," by Mr. Mark Fryar, of the School of Mines, Andersonian University, Glasgow, has induced its re-publication in a pamphlet, which can be procured at our office, price 6d. It being a paper entirely in the interest of the masters, and in every way calculated to enlighten the men upon their duties towards their employers, without leading them to expect unreasonable advantages in return, it is well worthy of consideration whether it would not be to the masters' ultimate advantage to circulate it extensively amongst their workpeople. The apparent object of the treatise—that it should be gratifying to the masters, and of a character that the men would read—has been well accomplished; consequently, it may be concluded that a larger number of readers will be obtained than by any other course that could have been pursued. The pamphlet, as a whole, will not be read without benefit by anyone.

CARRVILLE MECHANICS' INSTITUTE, DURHAM.—The members and friends of this institute were highly entertained on Tuesday evening, March 26, by a lecture on geology, by Mr. P. Cooper, mining engineer, of the Grange and Kipper Grange Collieries, who delivered a most valuable and interesting lecture, which was illustrated by a geological map of Great Britain, and by several sections specially prepared for the occasion, showing the order and succession of the rocks, the nature of the strata, and the fossils which they contain. The lecturer also exhibited specimens of organic remains from the triassic, permian, and carboniferous formations. The lecturer being so well known and appreciated induced the attendance of a very large and respectable audience, who listened with the most marked attention for nearly two hours, to a clear, concise, and most satisfactory exposition of the principles and facts of the sciences. The lecture was repeatedly applauded, and at its conclusion a hearty and unanimous vote of thanks was accorded to the lecturer.

SALES OF COPPER ORES.

SALES OF COPPER ORES AT THE CORNWALL TICKETINGS, FOR THE QUARTER ENDING MARCH, 1861.

Mines.	Sales.	Tons.	Amount.
Devon Great Consols	3	5096	£24,508 18 0
Clifford	3	1817	12,502 0 0
South Caradon	3	1260	12,104 2 0
West Seton	3	1755	11,537 9 0
West Basset	3	1687	11,101 1 6
West Caradon	3	988	9,118 2 0
Par Consols	3	843	7,868 2 0
Phoenix	3	1096	7,626 1 6
Fowey Consols	3	1063	7,078 18 0
Wheal Basset	3	651	4,769 4 6
East Basset	3	455	4,714 14 6
South Frances	3	718	4,483 6 6
Marke Valley	3	843	4,269 18 0
South Tolgu	3	587	4,001 9 0
United Mines	4	1252	4,000 13 0
Great Wheal Alfred	3	754	3,777 12 6
North Roskear	2	480	3,667 12 0
Great Wheal Buay	3	1235	3,628 6 0
South Crinnis	3	453	3,595 0 6
Great South Tolgu	3	497	3,561 3 6
Craddock Moor	3	444	3,406 18 6
Bedford United	3	602	3,392 11 6
Wheal Friendship	3	421	3,389 8 0
East Caradon	3	419	3,357 6 0
North Downs	3	392	3,226 3 6
East Consols and Well	3	349	3,187 1 0
East Wheal Russell	2	401	2,739 5 0
Holmbush	2	432	2,708 8 6
Tolvadden	2	607	2,622 10 0
Hingston Down	2	636	2,605 1 6
North Trekerby	3	410	2,556 6 0
Wheal Seton	3	439	2,309 4 6
St. Day United	2	544	2,211 3 6
Crelake	1	810	1,854 4 6
Wheal Margery	2	307	1,771 5 6
Tywarthall	3	358	1,745 12 6
Wheal Emma	3	414	1,739 12 6
Wheal Buller	3	291	1,632 3 6
Carn Brea	1	471	1,613 17 6
Copper Hill	2	260	1,513 7 6
East Rosewarne	2	170	1,474 1 0
Lady Bertha	2	426	1,421 8 6
East Pool	1	357	1,409 9 0
West Damsel	1	320	1,303 6 0
Pendennis	1	320	1,294 16 0
West Stray Park	1	170	1,259 0 0
East Crinnis and Well	2	359	1,208 14 0
West Alfred	2	331	1,208 8 0
Gunnis Lake Clitters	1	178	1,201 11 0
North Grambler	1	119	1,137 4 0
Botallack	1	110	1,090 12 6
Okel Tor	2	320	1,071 3 6
Gonsamena	3	204	1,058 10 0
North Wheal Robert	1	124	976 1 6
Collacombe	2	215	963 7 0
Wheal Anna	3	307	937 10 0
Thickmoor	3	169	883 10 0
Poolemoor	1	130	922 9 0
Kelly Bray	3	304	900 11 6
Levant	1	181	846 16 6
South Bedford	2	260	880 17 6
Hawkmoor	2	142	815 16 6
Tolcarne	2	148	796 0 0
Condurrow	1	277	790 8 6
Treloweth	1	114	768 2 6
Wheal Harriett	2	148	755 11 0
New Treleigh	1	140	717 19 0
Charlotte United	1	98	695 14 0
East Alfred	1	104	694 4 0
North Basset	2	147	656 4 0
Wheal Franco	2	113	640 17 6
Wheal Edward	1	150	617 10 0
Pen-an-dra	2	91	605 11 6
North Crofty	2	169	601 13 6
Wheal Agar	2	104	557 18 0
Rosewarne United	1	79	532 17 6
Stray Park	1	155	531 7 6
Stray Consols	1	111	526 10 0
Perran Mines	2	135	514 13 0
Wheal Ellen	2	135	514 13 0
East Carn Brea	1	49	501 0 6
Sortridge Consols	1	52	476 4 0
West Fowey	1	60	430 10 0
Mary Great Consols	1	74	412 11 0
Grambler and St. Aubyn	1	64	411 9 0
Treavean	2	137	387 11 0
South Crever	2	87	361 16 0
New Hender	1	39	355 17 6
Devon	1	96	327 19 0
South Crofty	1	65	304 15 6
Ciljath and Wentworth	2	83	299 9 6
West Trevelyan	1	37	289 12 6
Gawton	2	78	260 7 0
Fursden	1	60	242 2 0
Messer	2	50	225 0 0
Camborne Veau	1	45	214 17 6
Great Crinnis	1	55	198 0 0
Trehill	1	26	175 10 0
Stray and Courtenay	1	55	175 10 0
Trevelyan	1	55	162 10 6
Wheal Uny	1	30	138 19 0
Spear Moor	1	14	132 6 0
South Basset	1	38	124 9 0
Dolcoath	1	43	121 9 6
Trefry's Regulus	1	17	103 5 0
North Buay	1	15	102 7 6
South Carn Brea	1	23	102 6 0
Sigford Consols	1	20	95 10 0
Trefusis	1	12	73 19 0
Nancukuke	1	25	73 18 0
Camborne Consols	1	12	73 18 0
Caroline	1	12	70 4 0
East Tolgu	1	16	67 12 0
Cook's Kitchen	1	46	63 12 0
Wheal Arthur	1	20	62 0 6
Wheal Kitty	1	7	60 7 6
Huckworthy Bridge	1	9	59 8 0
Creag Brawse	1	18	51 12 0
Tretoll	1	9	49 2 6
West Providence	1	9	49 2 6
Great Onslow	1	10	46 5 0
Falmouth and Sperris	1	15	42 15 0
Trebarvah	1	10	35 15 0
New South Ellen	1	12	31 16 0
South Ellen	1	19	24 4 6
Trethellan	1	7	15 4 6
Total		41,402	£240,811 19 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Mines Royal Company	1498	£6,893 15 6
Vivian and Sons	5609	36,637 9 4
Freeman and Co.	2130	11,279 13 1
Grenfell and Sons	4640	33,696 7 8
Crown Copper Company	1327	7,285 18 5
Sims, Williams, and Co.	4927	27,440 19 4
Williams, Foster, and Co.	4494	43,802 4 11
Mason and Elkington	8291	29,624 15 1
F. Bankart	2290	11,671 13 1
Copper Miners' Company	2876	16,402 7 8
C. Lambert	1300	4,980 18 6
Newton, Keates, and Co.	522	3,351 3 0
Sweetland and Co.	2500	8,734 13 11
Total	41,402	£240,811 19 6

MINERS' FRIEND ASSOCIATION.—An appeal on behalf of a projected association for securing more stringent legislative interference in connection with the management of collieries has been issued. The principal promoters appear to be Messrs. C. Colwell (the author of "Ferry Facts"), which contained some original suggestions for applying the London Corporation Coal Tax, and W. P. Roberts, the colliers' attorney-general. The association appears to ignore altogether the fact that much has already been done to secure the advantages of education to the children, and that the masters contribute largely to the support of those whose means of support have been taken away by colliery accidents. Until the precise details of the scheme are made known it is, of course, impossible to say whether the association is worthy of patronage or not. The appeal concludes thus:—"This association, being sensible of those grievous wrongs, confidently and earnestly appeals to the humanity of a benevolent public to aid in this Christian cause, by forwarding their names as patrons, with subscriptions, however small, in order that pecuniary relief may be promptly sent to all sufferers of this class; and that, as soon as practicable, schools, &c., may be provided in all mining districts, and legal steps taken to induce a wise and just legislation upon this painful subject."

SCOTTISH SHIPBUILDERS' ASSOCIATION.—At the monthly meeting of this association, on Monday, a paper was read by Mr. David Kirkaldy—"Results of an Experimental Enquiry as to the Comparative Tensile Strength and other Properties of Steel and Wrought-iron under various Conditions." These results consist of tables and conclusions derived from about 1500 experiments, extending over several years, and conducted by Mr. Kirkaldy for Messrs. Robert Napier and Sons. It is scarcely possible to conceive a more careful and elaborate series of experiments on any one subject.

NORTH ATLANTIC TELEGRAPH.—The complete report of the "Proceedings of the Royal Geographical Society of Great Britain," which relate to the North Atlantic Telegraph, has been collected and issued in a separate form by Mr. Stanford, the publisher to the Society. The pamphlet contains all the information likely to be required upon the subject, and the facility offered by its publication for ascertaining the views for and against the project which have been expressed will do much to remove any doubt that may have existed as to its practicability.

SALES OF COPPER ORES.

SALES OF COPPER ORES AT THE SWANSEA TICKETINGS, FOR THE QUARTER ENDING MARCH, 1861.

QUARTER ENDING MARCH, 1861.			
Mines.	Tons.	Amount.	
Cobre	2873	£45,233 11	0
Ooklip	486	18,358 15	0
Wheal Maria	520	10,091 14	0
Springbok	274	9,051 2	0
Cuba	610	8,342 13	6
Del Soto	112	2,304 12	0
African	317	1,262 15	0
Australian	50	965 0	0
Great Barrier	64	873 12	0
Estrella	117	469 11	6
Spanish	19	230 7	6
Canoblas	12	178 16	0
San Domingo	9	108 10	6
Gellyreath	6	110 5	0
Corbet Dovey	48	108 7	0
Havre	7	96 13	0
Bathurst	4	69 4	0
Clarendon	3	44 14	0
Total	5481	£91,330 3	6

IRISH.

Berehaven	960	£9,402 8 6
Knockmahon	780	7,721 1 6
Ballycummisk	78	934 16 6
Browhead	26	239 19 0
Schull Bay	22	162 18 0
Holyford	6	61 5 0
Total	1871	£18,512 8 6

SUNDRY PLACES.

Laxey	198	£1,256 17 0
Acton	16	295 4 0
British ore	3	60 3 0
Smith's ore	28	42 0 0
Total	245	£1,654 4 0

REGULUS, SLAGS, &c.

British	104	£1,695 12 0
English and Canadian	47	969 6 0
Gloster Slag	8	347 0 0
Rotterdam Slag	19	36 2 0
Total	178	£3,048 0 0

RECAPITULATION.

Foreign	5481	£91,330 3 6
Irish	1871	18,512 8 6
Sundries	245	1,654 4 0
Regulus, slags, &c.	178	3,048 0 0
Total	7775	£114,544 16 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Mines	Tons.	Amount.
Copper Miners' Company	290	£3820 10 6
Freeman and Co.	413	6824 12 6
P. Grenfell and Sons	1388	17,623 19 6
Sims, Williams, & Co.	774	11,597 0 9
Vivian and Sons	1507	20,624 1 6
Williams, Foster, and Co.	1530	26,345 19 3

CLARENDON CONSOLIDATED MINING COMPANY OF JAMAICA (LIMITED).—Notice is hereby given, that the directors have this day made a CALL of TWO SHILLINGS AND SIXPENCE PER SHARE on the shares of the company, PAYABLE on or before the 10th day of April next, at the bankers of the company, Messrs. Heywood, Kennard, and Co., No. 4, Lombard-street, London, and the shareholders are hereby required to pay the same accordingly.

The transfer books will be closed from 23d January to 1st February, both days inclusive.

By order, JOHN H. KOCH, Sec.

187, Gresham-house, Old Broad-street, London, January 22, 1861.

NOTICE IS HEREBY GIVEN, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the HUELVA COPPER MINING COMPANY (LIMITED) will be HELD at the office of the company, No. 17, Gracechurch-street, London, on MONDAY, the 15th April, 1861, at One o'clock precisely, for the purpose of receiving from the liquidators appointed to wind up the affairs of the company a statement of the progress made in such winding up, and (if the meeting think fit) to confer upon the liquidators power to compromise calls and debts due to the company, and any claims against the company; and also for the purpose of appointing a person or persons to inspect the accounts and vouchers of the liquidators, pursuant to the Joint-Stock Companies Acts.

ALFRED HERVEY } Liquidators.
E. P. ROWSELL }

Dated April 4, 1861.

MARIQUITA AND NEW GRANADA MINING COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the above company will be HELD at the London Tavern, on Wednesday, the 17th day of April next, at Two o'clock in the afternoon, at which meeting a resolution to the following effect will be proposed for the approval of the shareholders:—

That the directors be authorised, in conformity with the Deed of Settlement, to borrow a sum not exceeding £7500 in addition to the £12,700 already borrowed upon the debentures of the company, upon such terms as to interest and time of payment as may appear desirable, provided the rate of interest does not exceed 10 per cent. per annum.

No. 2, New Bank-buildings, E.C., March 28, 1861. L. R. JONES, Sec.

THE SOUTH DEVON IRON AND GENERAL MINING COMPANY (LIMITED).—PREFERENCE STOCK.—Notice is hereby given, that the remainder of the 6000 preference shares, bearing a preferential dividend of 10 per cent. per annum, are hereby offered to the existing shareholders, application for which should be made on or before Tuesday, the 16th day of April, when any that may remain unsold will be offered to other than existing shareholders.

ATLAS TIN MINES.—The tin lodes are producing fine work for tin; 8 heads of stamps, of 3 cwt. each, have been stamping tin ore during the past month. The burning-house will be ready to receive the tin now being stamped by the end of the ensuing month, when regular monthly sales may be expected.

ATLAS IRON MINE.—Final arrangements have been made respecting the Bovey lignite; the fire-bricks have arrived, and the furnaces for the purpose of converting the large deposits of iron ore into charcoal iron will be immediately proceeded with.

By order, GEORGE F. GOODMAN, Sec.

City Bank Chambers, Threadneedle-street, London, E.C., March 28, 1861.

N.B.—Ten shillings per share will be required to be paid on allotment, and the remaining 10s. per share on the 1st day of May next.

RESPRYN COPPER MINING COMPANY (LIMITED). PARISHES OF ST. WINNOW AND LANHYDROCK, CORNWALL.

Capital £25,000, in 25,000 shares of £1 each.

10s. thereof to be paid on application for shares, and 10s. on the issue of the certificates of shares.

The directors have succeeded in making such alterations in the terms with the vendors of the mine, that a saving to the company of £4000 is now effected, and they have consequently determined not to issue more than 20,000 shares, without the consent of the shareholders specially summoned.

Pending the settlement of the above list, the directors, on their personal responsibility, have purchased the engine (73-horse cylinder) at the Wheel Messer Mine, which is admirably suited to the requirements of Respryn, and has been obtained on very advantageous terms.

The superintending states that as soon as the water is drawn to below the 10 fathom level he will make returns of ore, and tributors have offered to take pitches as soon as they are enabled to work at that point.

Prospectuses and every information may be obtained on application at the offices, No. 3, Cannon-street, London, E.C.; or from the brokers, Messrs. Wren and Grace, 6, Finch-lane; and Stock Exchange, London.

W. W. MANSELL, Manager.

THE TALYSARN SLATE COMPANY (LIMITED).

Directors: The Rev. M. W. LUSIGNAN, M.A., All Hallows, Thames-street. JOHN A. L. BARNARD, Esq., 52, Gracechurch-street, E.C. JAMES CLIFFORD HODGES, Esq., Great Tower-street. MARK JOHN TOMKINS, Esq., Green Bank Saw Mills, St. George's East, and Plaistow, Essex.

At a GENERAL MEETING of shareholders in the above company, held on Thursday, the 4th inst., at 9, Ely-place, Holborn.

JOHN HEAD, Esq., in the chair.

The report having been read, the following resolutions were carried unanimously:—

1. That the report now read be received and adopted.
2. That the election of Sir Philip Clarke and Major Miller as directors be cancelled, the same having been irregularly made.
3. That the two directors who retire at this meeting be re-elected.
4. That Mr. Eklerton be dismissed from the office of solicitor, and that he be required to deliver to the directors, at No. 9, Ely Place, Holborn, all books, papers, property, and documents in his hands belonging to the company; to deliver an account, and to pay over to the bankers of the company all moneys received by him belonging to the company.
5. That Benjamin Hope, Esq., of 9, Ely-place, Holborn-hill, be, and is hereby, appointed solicitor to the company.
6. That proceedings be taken for the recovery of arrears of call.
7. It being estimated that the outstanding liabilities of the company, exclusive of the vendor's claim, do not exceed £2000.—Resolved, that all unsettled claims against the company be at once investigated and discharged.
8. That the directors be authorised to settle, as they may see best, the present disputes with the mortgagees, and to raise by the issue of shares, or otherwise, the necessary capital for that purpose, for payment of the vendor, and for the efficient working of the quarries; and in the event of no arrangement being come to, that the proceedings advised by counsel be instituted against the mortgagees.
9. That the foregoing resolutions be advertised in the daily papers and Mining Journal.

That the thanks of the meeting be given to the Chairman, for his ability and courtesy in the chair.

THE GLAN-Y-PWLL SLATE AND SLAB COMPANY (LIMITED).

Capital £30,000, in 6000 shares of £5 each.

Incorporated pursuant to the Joint-Stock Companies Act, 1856-57.

Directors: Col. BUSH, 55, York-terrace, Regent's-park. G. B. CARR, Esq., Merchant, 5, Lawrence Pountney-place, Cannon-street. WILLIAM OGILVIE, Esq., Cushion-court, Old Broad-street, City. JOSEPH JACKLIN, Esq., Brigatton (late firm Pontifex and Jacklin). Lieut-Col. GEORGE O'BRYEN O'LEARY, Albion Tower, South Norwood. MORRIS ROBERTS, Esq., (firm of Roberts and Griffiths), Glamorgan Slate Works, Carnarvon.

BANKERS.—The London and County Bank.

Solicitors.—Messrs. Mayrick and Gedge, 4, Storey's-gate, Great George-st., Westminster.

BROKERS.—Messrs. Huggins and Rowell, 1, Threadneedle-street, London. Messrs. J. J. Stephens and Son, Dublin. Messrs. Brodie and Byrn, Livre Chambers, Liverpool. Mr. Robert McEwen, Ducie-buildings, Bank-street, Exchange, Manchester.

MANAGER.—Thomas Cooper Smith.

OFFICES.—5, WARFORD COURT, THINGMORTON STREET, CITY.

The object of this company is to work the Glan-y-Pwll Slate Quarries, situated in the parish of Ffestiniog, in the county of Merioneth, North Wales, and on the same mountain range as those magnificent quarries worked by Lord Palmerston, Messrs. Huddart and Mathews, and Mr. Holland. This sett adjusts their boundary, is a direct continuation of their seam, and consequently produces slate rock of precisely the same character and quality.

It is property held under lease for 40 years, on the following favourable conditions, viz.:—For every ton of slate, flag stone, or other stone, of the first quality, a royalty of 2s. 6d.; and for every ton of second or other slates a royalty of 1s. 3d., subject in the meantime to an annual rent of £10 merging into the royalty.

From the position of this sett it is, perhaps, unequalled in Wales in natural facilities. The workings are about 250 yards from the level, and the slate rock crops out from the top of the mountain. From the works an incline, at a comparatively small cost, may be laid down for the conveyance of slates in railway trucks direct to the main line, running within 100 yards of the mountain, to the quay at Port Madoc. The carriage is about 3s. 6d. per ton. Another very important advantage is the space afforded for the deposit of waste or debris sufficient for an unlimited period. The water-power is at all seasons ample for any work that may be required.

From an estimate recently made, it appears that slate rock may be broken down and manufactured for market at 21s. per ton; the market value is from 40s. to 50s. per ton. With a capital of £10,000 it is estimated that 600 tons of slate can be made per month, the value of which at 40s. per ton is £24,000, or £14,400 per annum, which, allowing for working expenses, royalty, cartage, and agency, will yield a net profit of £4010, or at the rate of 40 per cent. These returns may be considerably increased as the operations extend. Mr. Robert Hunt, F.R.S., has recently made a calculation as to the average of the profits from the workings of slate quarries in Wales; he gives them at upwards of 50 per cent., and some of the large quarries, it is confidently affirmed, realise as much as 100 per cent. So great and increasing is the demand for slates, that the supply is not equal to half the demand.

The following quarries are said to return annual profits as under:—The Penrhyn from £100,000 to £120,000, the Llanberis from £70,000 to £80,000, Lord Palmerston's upwards of £30,000, and those adjacent to the Glan-y-Pwll in the same proportion.

The annexed reports are from good practical men of business; as extensive quarry managers, their testimony to the value of the Glan-y-Pwll sett, with regard to the many advantages already referred to, will be read with interest, and leave nothing to be urged by the directors.

Such is the confidence entertained of the value of this property, and the favourable conditions on which it is held, that some of the directors have individually taken, and now hold, an interest in it; but which, including the lease, the plant, the slates now on the quarry bank, and the benefit of the work already done, it has been agreed to purchase for £10,000. A most favourable arrangement has been made, by which £5000 only in cash will be required in instalments, and £5000 in shares of the company, as follows, viz.:—1000 shares paid to £2 per share, and 1000 shares to £3 per share.

The capital of the company will consist of £30,000, in 6000 shares of £5 each. Deposit £1 per share, 10s. on application and 10s. on allotment. No further payment on shares for six months.

The company having been completely registered with limited liability, no shareholder can, under any circumstances whatever, be made responsible for a greater amount than the shares to which he subscribes.

There are no special Articles of Association, Table B under the Joint-Stock Companies Act of Parliament having been adopted in its entirety.

To ensure subscribers from any loss, which often arises when a sufficient number of shares are not subscribed for, the directors bind themselves to return the whole of the deposit money, unless at least one-half of the shares be taken.

A considerable portion of the required capital has been already privately subscribed.

Plans of the quarry, together with reports and samples of the slates, may be seen at the office of the company.

Applications for the remaining shares to be made in the enclosed form to the bankers, solicitors, brokers, and the manager, at the office of the company.

In Chancery.

TO BE SOLD, pursuant to a Decree of the High Court of Chancery, made in a Cause of WYLDE v. RADFORD, with the approbation of Vice-Chancellor Sir Richard F. Kinnersley, in One Lot, by Mr. James Carter, the person appointed by the said Court for that purpose, at the George Hotel, at Aylesford, in the county of Derby, on Tuesday, the 20th day of April, 1861, at Two o'clock in the afternoon, certain BED VEINS, SEAMS, and DELPHS of COAL, IRONSTONE, and OTHER MINERALS and MINERAL SUBSTANCES whatsoever lying and being within and under certain lands and hereditaments in the parish of ALFRETON, in the county of DERBY, now or late in the occupation of James Marples, and containing an area of 66 a. 2 b. 10 p., or thereabouts, particulars whereof may be had gratis at the office of Mr. SAMUEL RICHARD PARR SHILTON, solicitor, Nottingham and Southwell; Messrs. JOHN and FRANCIS BARBER and CURRY, solicitors, Derby; Mr. JAMES CARTER, the auctioneer; Mr. THOMAS SMITH, 15, Furnival's Inn, London; or Mr. RICHARD SMITH, 295, High Holborn, London; and WILLIAM WILSON, Esq., Alfreton.

CHARLES SMITH, Chief Clerk.

THOMAS SMITH, 15, Furnival's Inn, London (Agent for Samuel Richard Parr Shilton, Nottingham, plaintiff's solicitor).

Dated this 23rd day of March, 1861.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE SWANPOOL MINING COMPANY (LIMITED), and in the MATTER OF THE JOINT-STOCK COMPANIES ACTS, 1856, 1857.—TO BE SOLD, by direction of the Official Liquidator of the said company, with the sanction of the said Court, BY PUBLIC AUCTION, on Tuesday, the 23d day of April next, at Eleven o'clock in the forenoon, subject to such conditions as shall be then produced, and in such lots as shall be then determined, the whole of the VALUABLE MINING MACHINERY, MATERIALS, and OTHER EFFECTS at and upon SWANPOOL MINE, and the works thereupon, situate in the parish of Budock, within the said Stannaries, particulars of which appear in handbills.

The mines are held under and by virtue of three certain indentures of lease, dated respectively the 24th day of June, 1851, the 24th day of June, 1851, and the 24th day of October, 1851. And the estate and interest of the lessees therein, under the said several indentures of lease, will on the same day be offered for sale.

The mines may be inspected at any time prior to the sale, on application to Mr. ROOKS, in charge thereof; and further particulars, with conditions of sale, may be had on application at the office of the Official Liquidator of the said company, in Truro; to Mr. TILLY, solicitor, Falmouth; to Messrs. HODGE, HODGE, and MARSHALL, solicitors, Truro; to Messrs. VALLANCE and VALLANCE, solicitors, 20, Essex-street, Strand, London; and to Mr. STOKES, solicitor, Truro.—Dated Truro, April 3, 1861.

THE SWANPOOL SMELTING WORKS.

VALUABLE AND EXTENSIVE SMELTING WORKS, NEAR FALMOUTH, CORNWALL, FOR SALE.—A PUBLIC AUCTION WILL BE HELD at the Green Bank Hotel, Falmouth, on Saturday, the 30th day of April next, at Twelve o'clock at noon, for SELLING, in One Lot, with the concurrence of the Court of the Vice-Warden of the Stannaries, all that VALUABLE and EXTENSIVE PROPERTY, situate at Swanpool, in the parish of Budock, near Falmouth, known as the SWANPOOL SMELTING WORKS, together with the various MACHINERY, MATERIALS, and EFFECTS thereon, particulars of which appear in handbills.

The above works are of a very superior description, no expense having been spared in their erection to render them most efficient and complete; and having been constructed by the company within the last two years, they will be found in excellent repair and condition.

The above may be inspected at any time prior to the sale, on application to Mr. ROOKS, in charge thereof; and further particulars of the sale may be had on application at the office of the Official Liquidator of the Swanpool Mining Company (Limited), in Truro; to Messrs. VALLANCE and VALLANCE, solicitors, No. 20, Essex-street, Strand, London; or to Mr. STOKES, solicitor, Truro.—Dated Truro, April 3, 1861.

THE TORBANE HILL MINERAL.—FOR SALE, A LARGE QUANTITY OF THIS CELEBRATED MINERAL.—There will be SOLD, BY PUBLIC AUCTION, within the sale rooms of Messrs. P. Burn and Co., 9, Exchange-place, Glasgow, at Twelve o'clock noon, on the 17th April, 1861, A LARGE QUANTITY of the MINERAL in question, in lots to suit purchasers. The quality will be equal to the best in the market, being identical with the best Boghead as sold by Messrs. James Russell and Son. Samples will be seen, and particulars learned, on application at Messrs. P. Burn and Co.'s; or to Mr. GILLESPIE, Torbane Hill House.

WARWICKSHIRE.

COAL AND IRONSTONE MINES.—TO BE LET, on royalty, upwards of SIXTY ACRES, with TWO ENGINES, &c. There is a canal and public wharf within a short distance, and there is every probability of a railway being made which will afford communications with London and Birmingham. To an enterprising and responsible party the proprietor would afford every liberal accommodation.—Apply to Messrs. RAWLINS and ROWLEY, solicitors, Birmingham.

FOR SALE, A NOVEL DESIGN OF A STEAM BOILER.—The boiler in question may be made without rivets, and contains a vast extent of heating surface. Very little fire will be required. It will be applicable to any kind of engine, and portable if necessary.—Apply to "77," Mining Journal office, 26, Fleet-street, London, E.C.

FOR SALE, THE BRYNGLAS SILVER-LEAD MINE, situate near Pontefrydd, and about three miles from the Devil's Bridge, and twelve miles from the port of Aberystwyth, Cardiganshire.

The above mine has been worked by the present proprietors for nearly three years, and the machinery for pumping, crushing, and dressing the ore is of the very best description, and in perfect working order.

Upwards of £2000 has been expended in the erection of the machinery and the development of the mine. The shaft is 210 fms. In the level in the bottom the lode is worth from 15 to 20 cwt. per fm. The lode in the 20 fm. level is also worth from 15 to 20 cwt. per fm. There is an abundant supply of water, and the royalty is moderate.

For further particulars, apply to the Secretary, at the offices, Clarendon Hill, Shrewsbury.

TO BE SOLD, BY PRIVATE TREATY, THE LEASE IN PERPETUITY AND PLANT OF A VALUABLE LEAD MINING SETT, which is 1½ mile long by half a mile wide, and which has been worked by a private gentleman to a profit for many years, but who is now deceased. This offers an opportunity seldom met with for parties wishing to form a public company.—Every information will be forthcoming by applying to "X. Y. Z.," Mining Journal office, 26, Fleet-street, London.

SLATE QUARRY.—THE LEASE of a most VALUABLE SLATE QUARRY in the Ffestiniog range, which can be opened up and worked to great profit, at comparatively little outlay, TO BE SOLD on very moderate and easy terms. Address, "Slate Quarry," Mining Journal office, 26, Fleet-street, London, E.C.

CARNARVONSHIRE.

IMPORTANT TO CAPITALISTS.—VALUABLE SLATE AND SLAB VEIN FOR SALE.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, an EXTENSIVE SLATE AND SLAB VEIN, most advantageously situated within 15 miles from the proposed railway terminus at Bettws-y-Coed.—Plans, particulars, and reports may be had at the Mining Journal office, 26, Fleet-street, London, E.C.; and of Mr. W. Daw, Bangor, North Wales.

SOUTH WALES COLLIERY, MERTHYR DISTRICT.—TO BE DISPOSED OF, BY PRIVATE CONTRACT, on very advantageous terms, a HIGHLY IMPORTANT COLLIERY, known as the TYLACOGH COLLIERY, situate in the RHONDDA VALLEY, on the Rhondda branch of the Taft Vale Railway, by which line the coals are conveyed to the Cardiff docks. The quality of the coal is quite equal to the Merthyr coal, and is preferred to it for the use of the locomotives on the line. The thickness of the seam is about 6 ft., and the area is 2 a. 2 b. 20 p.

There is one shaft sunk to the upper 4 ft. vein of coal, a depth of 154 yards from the surface, and the quantity to be raised is estimated at 80,000 tons per annum. The galeage varies from 3d. to 9d. per ton on the large and small coal.

There is a farm attached to this colliery, which is in an excellent state of cultivation, and upon which a large outlay has been made in improvements by draining and otherwise.

For further particulars, apply to Messrs. FULLER and HOSKINS, 13, Billiter-street, London, E.C.; or to Mr. D. LLEWELLYN, mining engineer, Glyn Naph, Glamorganshire.

IMPORTANT TO MINERAL PROPRIETORS.—TO BE LET OR SOLD, the whole MINERALS of SOUTH and OVER CUMBERHEAD, consisting of LEAD, COPPER, ZINC, IRON, &c., situated near LESMAHAGOW, in the Upper Ward of LANARKSHIRE. As these, with one or two exceptions in active operation, are the only mines of the kind in Scotland, as they were undoubtedly worked to advantage in remote times, and are known to have been little or at all disturbed for the last century and a half, possessing the great advantages of being in a populous county, in the same district as the celebrated lead hills, with good access by a mineral railway in their immediate neighbourhood, and as the progress of mining science in facilities and working economy have been enormously developed during this long period, they may be considered to present a most tempting field for the enterprise of mining capitalists.

In a report upon them in 1815, by Professor Jamieson, of Edinburgh, the most eminent geologist of his day, he concludes as follows:—"The magnitude of the veins, the quantity of ore which previous trials have shown them to contain, the excellence of the ore, the nature of the vein stones, the kind of strata traversed by the veins, are considerations which induce me to recommend them to, and deem them worthy of, the attention of a mining company."

Reports and further information may be had on application to Mr. HUGH BOGLE, 122, St. Vincent-street, Glasgow.

DERBYSHIRE.

THE ALDERWASLEY FORGE AND WORKS, NEAR THE AMBERGATE STATION ON THE MIDLAND RAILWAY.—TO BE LET, on a lease for 7, 14, or 21 years, and may be entered upon immediately, the above-mentioned FORGE AND WORKS, with the STORE ROOMS, OFFICES and BUILDINGS, ROLLING and SLITTING MILLS, on the banks of the River Derwent, in the liberty of Alderwasley, and the WATER-WHEELS of 70 horse power and MACHINERY belonging thereto, late in the occupation of Messrs. Mold, who for nearly 60 years carried on a lucrative and extensive business as ironmasters at the said works, together with a newly-erected MESSUAGE, or DWELLING HOUSE, very pleasantly situated near the said works, with the green-house, stable, coach-house, and capital garden belonging thereto, and upwards of 30 acres of excellent land, and 15 workmen's houses and counting-house, near or contiguous to the works.

The works are situated within half a mile of the Ambergate station on the Midland Railway, and the Cromford and Belper turnpike-road, the branch railway from Ambergate to Rowsley (on which there is a siding and wharf for the use of the works), and the Cromford Canal (attached to which is a wharf also for the use of the works), are all parallel therewith and immediately contiguous thereto, and afford excellent railway and canal transit to and from London, Leeds, Nottingham, Derby, and all parts of the kingdom; and the extension of the railway from Rowsley to Buxton, now in progress, will give a direct communication with Manchester, Liverpool, &c.

It is also available for saw-mills on an extensive scale, or for any other purpose requiring power and facility of transit.

For further particulars, and to treat, application may be made to Messrs. WOODHOUSE and JARROLD, civil and mining engineers, Derby; or at the offices of Messrs. NEWBOLD and SON, solicitors, Matlock, from whom tickets may be obtained to inspect the works.

WHEATLEY KIRK AND CO., GENERAL ENGINEERS, MACHINISTS, TOOL MAKERS, &c., of MANCHESTER, continue to supply any class of machinery for home and exportation, with the utmost facility. Their catalogue is sent by post (free) on application.

WHEATLEY KIRK AND CO. CALL ESPECIAL ATTENTION to their STOCKS, TAPS, and DIES. WHITWORTH STANDARDS of various sizes in cases.—Manchester, March, 1861.

BELL BROTHERS beg to intimate that, having become SOLE LICENSEES in the United Kingdom of PROF. DEVILLE'S METHOD OF PRODUCING PURE ALUMINIUM, they are now in a POSITION to SUPPLY, from their works here, both this metal and its compound with copper, known under the name of ALUMINIUM BRONZE.—Newcastle-on-Tyne, September, 1860.

FOR SALE, A CONDENSING ENGINE, 36 in. cylinder, 7 ft. 4 in. stroke, with double beam, 21 ft. 6 in. long, and a spare double beam 24 ft. long.

A CONDENSING ENGINE, 12 in. cylinder, 3 ft. 6 in. stroke, beam 12 ft. long, with pumping and winding apparatus; and one CYLINDRICAL BOILER, 26 ft. by 4 ft., with steam and feed pipe complete.

A HIGH PRESSURE ENGINE, 12 in. cylinder, 2 ft. 9 in. stroke, beam 1 ft. long, with winding apparatus; and one CYLINDRICAL BOILER 20 ft. by 3 ft. with steam and feed pipe.

Also a quantity of pumps, &c.—Apply to the BRIGHAMTON COAL CO., near Wrenham.

TO ENGINEERS, MILLWRIGHTS, &c.—KIRKSTALL FORGE, YORKSHIRE, has long been famous for the excellence of its manufactures, and attention having been directed to the manufacturing of TURNING BARS, a first-rate reputation has now been established for these bars, for bright or black shafting, &c. They are STRAIGHT, ROUND, SOLID, ENTIRELY FREE from LAMINATIONS and SCALES, and at the same time STRONG BODIED, and the PRICE does NOT EXCEED the cost of ordinary STAFFORDSHIRE or best SCOTCH BARS, while it is infinitely MORE ECONOMICAL than any other iron in the market, being so very much more easily finished for use. A large stock always on hand, in long lengths, up to 6½ diameter; can be rolled to 8 in. diameter.—Apply to ROBERTSON BROTHERS and Co., Iron Merchants, 44, St. Enoch-square, Glasgow.

TO BOILER MAKERS, IRON SHIPBUILDERS, AND ENGINEERS.—Yorkshire iron has long been admitted to be the best in the market, and experience has proved that MILTON BEST REFINED BOILER PLATES are without exception the BEST VALUE TO BE PROCURED, COMBINING as they do GREAT DUCTILITY and TENSILE STRENGTH with MODERATION in COST, the price very little if at all exceeding that of Scotch boiler plates.—Apply to ROBERTSON BROTHERS and Co., 44, St. Enoch-square, Glasgow.

HEMP AND WIRE-ROPE.

JOHN STEPHENS AND SON, HEMP AND WIRE-ROPE WORKS, ASHFIELD, FALMOUTH, CORNWALL. MANUFACTURERS OF FLAT AND ROUND HEMP AND WIRE-ROPE, GUIDE RODS FOR SHAFTS, GALVANISED WIRE SIGNAL LINE and STRAND FENCING, &c., for MINES, RAILWAYS, &c.

A first-class medal was awarded to JOHN STEPHENS and Son for their manufactures, by the Royal Cornwall Polytechnic Society, in 1860.

PATENT BITUMINIZED GAS, WATER, AND DRAINAGE PIPES.—These PIPES POSSESS all the PROPERTIES NECESSARY for the CONVEYANCE of GAS and WATER, and also for DRAINAGE PURPOSES—viz., GREAT STRENGTH, GREAT DURABILITY, and PERFECT INOXIDABILITY, and being non-conductors are not affected by frost, like metal pipes. They are proved to resist a pressure of 220 lbs. on the square inch (equal to 500 ft. head of water), are only one-fourth the weight, and considerably cheaper than iron pipes. They are made in 7 ft. lengths, and the joints are simple and inexpensive. These pipes have been in use in France, Spain, and Italy nearly three years, where the demand for them is very great. The opinions of the press on a public test at the Houses of Parliament, before a large number of engineers and other scientific gentlemen, may be had, with further particulars, at the office of the company, on application to Mr. ALEX. YOUNG, 67, Mark-lane London, where sample pipes may be obtained for trial.

PATENT LEVER BREAK, FOR RAILWAY WAGONS, doing away with the objectionable break rack. Can be APPLIED to EXISTING STOCK at a TRIFLING EXPENSE. Royalty moderate. Models can be seen at 34, Great George-street, Westminster; and the breaks in action at the works of the Railway Carriage Company; at the Peterborough Station, on the Eastern Counties Railway; the Rugby Station, London and North-Western Railway; the Cardiff Docks Station, Taft Vale Railway; and at the Works, Oldbury, near Birmingham, where all communications are requested to be sent.

THE TORBANE HILL MINERAL. It is a disgrace to Science that any doubt should ever have been thrown by any scientific man upon the nature of this substance, now so well known everywhere throughout the civilised globe as the Torbane Hill Mineral, with the alias, when under disgrace, of Boghead Gas Coal. Nine-tenths, or even a larger majority, of all scientific men, led by those who are at the head of their departments of the various physical sciences, are now quite as one on the subject. The States of the Zollverein and the Prussian Government have decided years ago that the substance in question is not coal, and so not liable to Customs duty. And lately the French authorities also have pronounced the substance to be bituminous schist (*bitume solide ou pierre de schiste*), and therefore able to pass into France free of the duty leviable upon coal. That the base of this mineral is purely a clay, and not, as happens in the case of all coals, preponderating fixed carbon—charcoal or cinder, is a fact now as well known everywhere as any physical fact of the kind can be. It is, moreover, well known that the mineral substance in question gives 75 per cent. of a valuable tar or oil, capable, by easy purifying and rectifying processes, of yielding a highly valuable, because most economical, illuminating oil, as well as thicker oil, useful for all sorts of lubricating purposes, solid paraffin, and other important products. On a clay base equal to one-fourth in weight of the substance, there should be superinduced the enormous proportion of three-fourths, or 75 per cent. of oil—usually called, as it is, paraffine oil—is one of the wonderful facts relating to a mineral which is surrounded by an atmosphere of wonders. The Torbane Hill Mineral, in fine, is one of the most astonishing discoveries of the day, in an age of physical discoveries. It must be exceedingly gratifying, therefore, to all the patrons of physical science, and indeed to all lovers of truth, that an opportunity is about to be afforded for the fullest discussion, by the scientific men of all countries in Christendom, on the nature and peculiar qualities of this celebrated substance. If the physical sciences singly—if all the physical sciences united—be not adequate to tell whether this thing be coal, or clay, or oil, or gas, or what else, in fine, the mineral has had much *celui* slanders, and is likely to have still a great deal more celebrity, higher and better. Its fame will be world-wide.

The opportunity alluded to will be afforded by an action which Mr. and Mrs. Gillespie, of Torbane Hill, have instituted against Messrs. Young, Binney, and Meldrum, of the Chemical Works, near Bathgate, and in the immediate vicinity of Torbane Hill itself. It is nowise necessary to detail, on the present occasion, many particulars regarding the nature and operation of the law action in question; it may suffice to state that, whereas Mr. and Mrs. Gillespie have been injured, and are in course of being injured, to a vast extent by that chemical company's operations, in lowering and keeping down the price of the Torbane Hill Mineral in the market, by their alleged patent, Mr. and Mrs. Gillespie conclude against that company on this ground (among other grounds), that whatever patent, good or bad, they may have applicable to coal, it cannot, with any propriety, or without violation to truth, be held to be applicable to the Torbane Hill Mineral, which is not coal at all, but is, in truth, a new mineral, it being indeed "a new mineral substance, having an argillaceous base, and of so peculiar a nature as to constitute it a new and very peculiar variety of bituminous schist, shale, or clay," and generally called the Torbane Hill Mineral. The scientific world will learn with pleasure the information that so satisfactory an investigation is to be afforded.

All scientific gentlemen, whether chemists, microscopists, mineralogists, or geologists, as well as all practical men, engaged in any occupation which requires, or even permits, the use of the Torbane Hill Mineral, or whatever country of Europe or part of North America—who feel disposed to bear testimony to the truth concerning this substance, by declaring their reasons for holding it not to be coal, are requested to send their names, without delay, to Mr. GILLESPIE, of Torbane Hill, Scotland (office, 7, North-street, David-street, Edinburgh), or to any of his agents in England or Scotland, viz.:—

Messrs. CONNELL and HOPE, 3, Princes-street, Westminster.
Messrs. SIMON and THAILL, Solicitors, Westminster.
Messrs. D. M. and H. BLACK, W.S., Edinburgh.
Messrs. MORROW, WHITEHEAD, and GREGG, W.S., Edinburgh.
Messrs. MACALISTER and FRISK, W.S., Edinburgh.
Messrs. MITCHELL, ALLARDICE, and MITCHELL, Writers, Glasgow.

SARL AND SONS, 17 and 18, CORNHILL, respectfully SOLICIT A VISIT to their magnificent ESTABLISHMENT. The ground floor is more particularly devoted to the display of FINE GOLD JEWELLERY, GOLD and SILVER WATCHES, and FINE GOLD CHAINS.

The SILVER PLATE DEPARTMENT is in the gallery of the building, and consists of every article requisite for the table and sideboard.

In the magnificent show-rooms is displayed a large and beautiful stock of ARGENTINE PLATE, the manufacture of which has stood the test of 20 years' experience. Sarl and Sons have also fitted up a separate show-room for the display of DRAWING and DINING ROOM CLOCKS of the most exquisite designs. Books containing drawings and prices may be had upon application.

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AUSTRALIA AND NEW ZEALAND WHITE STAR EX-ROYAL MAIL CLIPPERS, SAILING FROM LIVERPOOL to MELBOURNE on the 1st and 30th of every month. FOR MELBOURNE.

Ship.	Captain.	Register.	Burthen.	To sail.
SHALIMAR	ALLEN	1700	5000	April 25.
EMPEROR OF THE SEAS	BRAGO	1600	4750	May 20.
BLUE JACKET	WHITE	1650	4750	May 20.

The April packet will sail on the 25th of the month.

The clippers of this line are the largest, finest, and handsomest in the trade, and are well known for their famous passages, and the unwavering punctuality of their sailing engagements. Passengers must embark, without fail, on the day previous to advertised date.—For freight or passage apply to the owners, H. T. WILSON and CHAMBERS, 21, Water-street, Liverpool; or to GUNDALEY and Co., 65, Parliament-street; or SETON, PRACOCK, and Co., 116, Fenchurch-street, London.

Willcox's Australian and New Zealand hand-books sent for two stamps.

LEICESTER AND CO. (late Leicester, Brache, and Tague), CONSULTING MINING ENGINEERS AND SURVEYORS, and GENERAL MINING AGENTS, MELBOURNE, VICTORIA, PROCURE MINING LEASES OF

BEDFORD IRONWORKS, TAVISTOCK.

NICHOLLS, WILLIAMS, AND CO. have generally a GOOD STOCK OF SECOND-HAND MINING MATERIALS FOR SALE, including ironwork for a water-wheel, 40 ft. diameter, 2½ ft. breast. They also MANUFACTURE STEAM ENGINES of every description on the newest principle. Castings and wrought-iron work made at the shortest notice. Machinery sent to all parts of the world. Steam boilers and chains warranted of the best description.

TO COAL OWNERS AND COKE BURNERS.

MACKWORTH'S PATENT COAL WASHER, OR PURIFIER.—This MACHINE will EXTRACT THE SHALE AND ALL HEAVY IMPURITIES FROM SMALL COAL at a COST OF TWOPENCE PER TON. —For particulars and references, apply to the makers, A. and T. FAY, Temple-gate Works, Bristol; or to Mr. Jos. RUDEN, Basinghall-street, Leeds.

TO COLLIERY PROPRIETORS.—PATENT TIPPING MACHINES, TO DIMINISH THE LOSS FROM BREAKAGE IN LOADING COAL ON RAILWAY WAGONS, SHIPS, &c. —ARTHUR AND JAMES RIGG, PATENTERS AND MAKERS, GEORGE STREET, CHESTER.

VENTILATION OF MINES.—ELLIS LEVER INVITES the ATTENTION OF OWNERS, VIEWERS, AND MANAGERS OF COLLIERIES to his recently IMPROVED MATERIAL FOR BRATTICING AND MAKING TRAP DOORS in the working of coal mines. It is made in every width, and in various qualities, prices of which may be had on application.

For the VENTILATION OF SHAFTS, and for CONVEYING AIR to the various UNDERGROUND WORKINGS OF MINES, ELLIS LEVER has contrived and introduced a VERY SERVICEABLE DESCRIPTION OF WATER-PROOF AND AIR-PROOF TUBES, from 1 to 6 ft. diameter, and in unlimited lengths. Further information may be had on application to the manufacturer, ELLIS LEVER, West Gorton Works, Manchester.

"THE RAILWAY AND THE MINE."—LEVER'S Illustrated Year-Book for 1861, price 2s. 6d., may be had in London of Simpkin, Marshall, and Co., and all booksellers throughout the kingdom.

PATENT SAFETY FUSE.—THE GREAT EXHIBITION PRIZE MEDAL WAS AWARDED TO THE MANUFACTURERS OF THE ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE has now a thread wrought into its centre, which, being patent right, infallibly distinguishes it from all imitations, and ensures the continuity of the gunpowder. This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate. Address.—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingsmill, Cornwall.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON AND CO., PENHALLICK, POOL, near CAMBORNE, CORNWALL, and BRYMBO, near WREXHAM, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and awarded to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.

For the convenience of their customers and others in the North, W. BRUNTON and Co. have recently erected a branch manufactory at Brymbo, near Wrexham, where, as at Cornwall, they are at all times PREPARED TO EXECUTE UNLIMITED ORDERS FOR SUPPLYING FUSE upon warrant that it will prove equal to, if not better than, any to be procured elsewhere.

AYTOUN'S PATENT SAFETY CAGE FOR MINES.



SAFETY FOR THE MINER.—An accident occurred at one of the pits belonging to Earl Granville, at Star Green, Hanley Potteries, by which ten men were killed and other ten severely injured. At half-past two a "cage," containing fourteen men, was being drawn up the shaft of the "big pit," while another cage with six men was being lowered. As the descending cage drew near the surface the signal-bell in the engine-room sounded as usual, in order that the engine might be at once stopped. The engine-tender was, however, too late in attending to his signal, and the consequence was that one cage was drawn up beyond its proper point, while the other went to the bottom of the shaft with a heavy shock. The ascending cage was drawn up till it reached the wheel over which the rope attached to it worked, and was being taken round, when the whole fourteen men, with one exception, were precipitated beneath; six fell down the shaft, and were dashed to pieces; three fell on the pavement at the pit's mouth, and one on the iron pavement, and was killed on the spot; four who were thrown on the ground received fearful injuries. The occupants of the descending cage were all more or less injured by their fall, but none of them were killed. We have over and over again drawn the attention of mine proprietors and viewers to the imperative necessity of adopting means, now proved to be wholly effectual, for the prevention of lamentable accidents like this. Will colliery owners never listen to the pleading voice on behalf of the poor miners, which tells them that over-winding need never occur? In the present case of Earl Granville's pit, had such a disengaging catch and safety cage as is shown in our plate 282, for December, 1858, been fitted up, the most careless engine man could not have brought about any casualty whatever. The apparatus to which we have referred is that invented by Mr. R. Aytoun, of 3, Fettes-row, Edinburgh, and we quote it as being most successful attempt at a safety cage. —*Practical Mechanic's Journal*, January, 1860.

FRIGHTFUL COLLIERY ACCIDENT.—An appalling occurrence happened near Wolverhampton on Saturday morning, which resulted in the instant death of seven persons. At a little before six o'clock the colliers at the Blue Fly Pit, at the Wednesday Heath Colliery of Mr. H. B. Whitehouse, assembled around the pit's mouth to descend to their work, down a shaft nearly 100 yards in depth. During the previous night the engine had been used in drawing water from the pit, and on Saturday morning the night engine-tender had left duty, and the engine-tender for the day had taken the engine in charge. On passing each other, the engine-tender who was going off duty said to his successor, "It's all right." Presuming upon the supposed truthfulness of the statement, the day engine-tender went confidently into the engine-house, and the colliers received the customary signal to jump into the skip; four men and three boys obeyed the signal, the engine was set in motion, and the skip raised a few inches from the wagon or platform that on such occasions forms the temporary covering to the mouth of the shaft, and the wagon was drawn away to allow the skip to descend. The engine had been scarcely reversed before it was found that the drum upon which the wire-rope that held the skip was coiled had been imperfectly connected with the engine. In no way held in check, therefore, it began to revolve with great rapidity, and in an instant the men and boys in the skip were literally dashed to atoms at the bottom of the shaft. —*Scottsman*, January 24, 1860.

These two accidents are given for the consideration of those who believe that safety cages are unnecessary where attention is paid to the state of the rope. In neither of these cases were the casualties owing to any deficiency in the rope or gearing, and yet seventeen lives have been sacrificed, not one of which would have been lost had a safety cage with its disengaging catch been in use.

DESCRIPTION OF CAGE.—The only novelty in this cage lies in the upper slides, or shoes, and their appendages. These slides, or shoes, B, C, are two in number; but being placed on opposite sides of the cage, only one of them can be seen in the drawing. Each of these slides has a single bolt, or stud, B, by which it is attached to the cage, and around which it turns; a long arm, A, to the extremity of which the winding chain is attached; a stop, H, which prevents the arm from being pulled above the horizontal line; and a spring, E, F, which lowers it when the winding chain is slack.

From this description it is easily seen that, in the event of the rope or gearing giving way, as in Fig. 2, the spring, E, F, will tilt the shoes, or slides, B, C, that they immediately seize hold of the guide rods in the same manner as a boring key in the hands of a miner lays hold of the boring rods, and with the same tenacity of grip; and although the rope should come down on the top of the cage, the only effect would be to cause the shoes to dig deeper into the guide rods, and thus to make the hold more secure. The means of arresting the cage in its descent being thus provided, there need be no hesitation in adopting the "disengaging catch," whereby, in a case of over-winding, the rope is let go and the cage remains safely suspended from the guide rods.

It may be mentioned that the safety apparatus costs little money, can be fitted to existing cages, and is also applicable to guide rods of iron or wood. Moreover, when brought into action it does not injure the guide rods, and consequently, after an accident, in which lives and property may have been saved, the winding may be proceeded with almost immediately.

To ensure the speedy adoption of this invention, the license fee for a single cage, during the existence of the patent right, has been limited for the present to £1.

For licenses, reference to parties who use the cage, or further information, application may be made to ROBERT AYTOUN, 3, Fettes-row, Edinburgh.

SAMUEL GRIFFITHS' STAFFORDSHIRE IRON TRADE CIRCULAR. Published every Saturday afternoon. Circulation, 7000 per week. Price £1. 1s. per annum, in advance, post free, being registered for transmission abroad at same price.

The IRON CIRCULAR gives the state of the Market with respect to Pig and Malleable Iron; the Official Prices of Bars, Hoops, Sheets, and most other kinds of Staffordshire Iron; a Report of the Iron Trade throughout England, Scotland, and Wales; the Scotch Pig Market up to the close of the market on the day of publication; the Closing Price of the Funds and the Principal Railway Stocks up to two o'clock the same day; a Monthly Report of the Iron Trade in France; a Weekly Report of the Money Market, London Discount Market, state of the Foreign Exchanges; the Weekly Return of the Bank of England; the Monthly Return of the Bank of France; a correct Weekly Account of all the Gold Ships at Sea, London bound; likewise an accurate Weekly Return of all the Gold and Specie received during the week; a Report of the Copper Market, with prices of all kinds; a Report of the Tin Market, with present prices, and the same of Lead and Spelter, every week. The IRON CIRCULAR likewise contains an account of all Failures, Dissolutions of Partnerships, Changes in Firms, Stoppage of Works, Works Recommencing, New Works, or those in course of erection; in a word, the CIRCULAR gives every information connected with the Iron Trade which Mr. Griffiths, whose well-known connection with it, considers would be useful and acceptable to the Ironmaster, the Merchant, the Shipper, Banker, or any other Buyer of Iron. The same may be said with regard to Copper, Tin, Spelter, and Lead. A Tabular Statement will be published with the CIRCULAR every three months, showing the number of Furnaces in and out of blast in all the Iron Districts, the quantity of Iron made, and likewise the quantities of Coal and Ironstone consumed in its production.

Parties wishing to subscribe will send a post-office order, addressed to S. GRIFFITHS, Metal Broker, Wolverhampton, which will include the cost post free to end of this year.

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM. BROAD AND NARROW GAUGE COAL AND IRONSTONE WAGONS. IN STOCK—FOR SALE OR HIRE.

RAILWAY WAGONS.—JONATHAN KETLEY, SOHO CARLAGE AND WAGON WORKS, NEAR BIRMINGHAM. ALL DESCRIPTIONS OF RAILWAY WAGONS FOR SALE OR HIRE. MANUFACTURER OF ALL KINDS OF RAILWAY IRONWORK.

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GEORGE HAYWOOD, of Rotherham, Ironfounder (Chairman). CHARLES ATKINSON, of Cratree Lodge, Sheffield, Merchant. ROBT. G. HOYLE, Esq., of Aughton Hall, Rotherham. HENRY KING SPARK, Esq., of Greenbank, Darlington. SAMUEL R. SANDERS, of Parkgate Ironworks, Rotherham. WILSON WATERFALL, of Rotherham, Banker. BANKERS—The Sheffield Banking Company. SOLICITORS—Messrs. Hoyle and Son, Rotherham. SECRETARY—Mr. John Barras.

PERMANENT WAY RAILS for sidings, &c., COLLIERY RAILS, CONTRACTORS' RAILS, EARTH WAGONS, and CONTRACTORS' MATERIALS FOR SALE, by ROBERT WAINWORTH, Newport, Monmouthshire.

JAMES RUSSELL AND SONS, CROWN TUBE WORKS, WEDNESBURY, STAFFORDSHIRE. WAREHOUSE.—81, UPPER GROUND STREET, BLACKFRIARS, LONDON, S. The Original Inventors and First Manufacturers of the Patent Wrought-Iron Tubes for Gas, Steam, Water, &c. Enamelled Tubing, and Glazed ditto. Russell and Howell's Homogeneous Tubes. And agents for G. F. Muniz's Solid Brass Tubes. Every variety of fittings. Trade mark.

LOYD AND LLOYD, ALBION TUBE WORKS, BIRMINGHAM. MANUFACTURERS OF PATENT LAP-WELDED IRON TUBES, FOR LOCOMOTIVE, MARINE, AND STATIONARY BOILERS. IMPROVED HOMOGENEOUS METAL TUBES. ALL DESCRIPTIONS OF TUBES AND FITTINGS FOR GAS, STEAM AND WATER, PLAIN, GALVANIZED AND ENAMELLED. GUN-METAL STEAM GLAND COCKS, WATER GAUGES, &c.

FARRAR'S PATENT STEEL COMPANY, WARDSEND STEEL WORKS, SHEFFIELD, MANUFACTURERS OF BEST CAST STEEL, MALLEABLE AND MILD STEEL CASTINGS, SUPERIOR CAST-STEEL FILES, &c., CALL THE ATTENTION OF ENGINEERS AND ALL USERS OF FIRST-CLASS STEEL TO THE GREAT SUPERIORITY OF STEEL MANUFACTURED UNDER THIS PATENT. Prices:—First quality £50 per ton. Second quality 40 " Third quality 30 "

Manufactured by Wardsend Steel Works, SHEFFIELD. LONDON OFFICE, 21, BOW LANE, CANNON STREET WEST, E.C. Where all communications are to be addressed.

SHORTIDGE, HOWELL, AND CO., HARTFORD STEEL WORKS, SHEFFIELD, SOLE MANUFACTURERS OF HOWELL'S PATENT HOMOGENEOUS METAL PLATES FOR BOILERS, LOCOMOTIVE FIRE BOXES, and TUBES, COMBINING THE STRENGTH OF STEEL WITH THE MALLEABILITY OF COPPER. RUSSELL AND HOWELL'S PATENT CAST STEEL TUBES. McCONNELL'S PATENT HOLLOW RAILWAY AXLES.—For prices and terms, apply to SHORTIDGE, HOWELL, and Co., Hartford Steel Works, Sheffield; or Messrs. HARVEY and Co., 12, Haymarket, London.

CONDIE'S PATENT STEAM HAMMERS.—FIRST-CLASS "MOVING CYLINDER" STEAM HAMMERS, from 5 cwt. to 7 tons, suitable for jobbing forces, puddling forces, and the smiths' shops of engineers, shipbuilders, &c. Pressure of steam required, 25 lbs. BAIN AND WYLIE (Successors to John Condie), Shields Ironworks, 330, Eglington-street, Glasgow.

WIRE-ROPE TESTING. PUBLIC TEST OF A. J. HUTCHINGS AND CO.'S PATENT WIRE-ROPE AT LIVERPOOL, FEBRUARY 27, 1861.

[From the *Daily Post* of March 1, 1861.] On Wednesday, the 27th of February, a series of EXPERIMENTS ON WIRE-ROPE took place at the Corporation Testing Works, King's Dock. The specimens tested were manufactured by the well-known firm of A. J. Hutchings and Co., of Millwall, London, the Contractors to the Lords of the Admiralty and various foreign Governments, the character of whose rope is so well known in this country, as well as all parts of the Continent. Capt. Ducraft, of H.M.S. *Hastings*, and a number of other gentlemen connected with shipping, were present to witness the experiments, all of which were considered highly satisfactory, and in every respect sustained the reputation of the manufacturers. The following are the results of the experiments:—

An 8 in. rope bore 70 tons WITHOUT BREAKING. Circumference and breaking strain.

Size.	Hutchings and Co.'s wire-rope for ships' rigging. Tested Feb. 27, 1861.	Newall and Co.'s Test of Oct. 29, 1860.	Garnock, Bibby, and Co.'s Test, Oct. 29, 1860.
2 3/4 tons	14 tons	3 tons	27 tons
3 1/4 tons	20 tons	3 3/4 tons	29 tons
4 1/4 tons	27 tons	4 3/4 tons	32 3/4 tons
5 1/4 tons	34 tons	5 3/4 tons	45 1/4 tons

N.B.—The 2 3/4, 3 1/4, and 4 1/4 in. ropes were the sizes actually tested. The remaining sizes and strains are comparative.

The above tests certified by Mr. McDonald, the Superintendent of the Corporation Testing Works, Liverpool.

PUBLIC TEST OF WIRE ROPE AT THE CORPORATION TESTING WORKS, LIVERPOOL, 29th OCTOBER, 1860. Instituted by Messrs. R. S. Newall and Co.

[From the *Mining Journal* of November 10th, 1860.]

Garnock, Bibby, and Co.	Newall and Co.	Hutchings and Co.
4 1/4 in. broke at 26 tons 10 cwt.	4 1/4 " " " 18 " 5 "	4 1/4 " " " 19 " 15 "
5 1/4 " " " 24 " 10 "	5 1/4 " " " 24 " 10 "	5 1/4 " " " 24 " 10 "
6 1/4 " " " 30 " 10 "	6 1/4 " " " 30 " 10 "	6 1/4 " " " 30 " 10 "
7 1/4 " " " 36 " 10 "	7 1/4 " " " 36 " 10 "	7 1/4 " " " 36 " 10 "
8 1/4 " " " 42 " 10 "	8 1/4 " " " 42 " 10 "	8 1/4 " " " 42 " 10 "
9 1/4 " " " 48 " 10 "	9 1/4 " " " 48 " 10 "	9 1/4 " " " 48 " 10 "
10 1/4 " " " 54 " 10 "	10 1/4 " " " 54 " 10 "	10 1/4 " " " 54 " 10 "
11 1/4 " " " 60 " 10 "	11 1/4 " " " 60 " 10 "	11 1/4 " " " 60 " 10 "
12 1/4 " " " 66 " 10 "	12 1/4 " " " 66 " 10 "	12 1/4 " " " 66 " 10 "
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51 1/4 " " " 300 " 10 "	51 1/4 " " " 300 " 10 "	51 1/4 " " " 300 " 10 "
52 1/4 " " " 306 " 10 "	52 1/4 " " " 306 " 10 "	52 1/4 " " " 306 " 10 "
53 1/4 " " " 312 " 10 "	53 1/4 " " " 312 " 10 "	53 1/4 " " " 312 " 10 "
54 1/4 " " " 318 " 10 "	54 1/4 " " " 318 " 10 "	54 1/4 " " " 318 " 10 "
55 1/4 " " " 324 " 10 "	55 1/4 " " " 324 " 10 "	55 1/4 " " " 324 " 10 "
56 1/4 " " " 330 " 10 "	56 1/4 " " " 330 " 10 "	56 1/4 " " " 330 " 10 "
57 1/4 " " " 336 " 10 "	57 1/4 " " " 336 " 10 "	57 1/4 " " " 336 " 10 "
58 1/4 " " " 342 " 10 "	58 1/4 " " " 342 " 10 "	58 1/4 " " " 342 " 10 "
59 1/4 " " " 348 " 10 "	59 1/4 " " " 348 " 10 "	59 1/4 " " " 348 " 10 "
60 1/4 " " " 354 " 10 "	60 1/4 " " " 354 " 10 "	60 1/4 " " " 354 " 10 "
61 1/4 " " " 360 " 10 "	61 1/4 " " " 360 " 10 "	61 1/4 " " " 360 " 10 "
62 1/4 " " " 366 " 10 "	62 1/4 " " " 366 " 10 "	62 1/4 " " " 366 " 10 "
63 1/4 " " " 372 " 10 "	63 1/4 " " " 372 " 10 "	63 1/4 " " " 372 " 10 "
64 1/4 " " " 378 " 10 "	64 1/4 " " " 378 " 10 "	64 1/4 " " " 378 " 10 "
65 1/4 " " " 384 " 10 "	65 1/4 " " " 384 " 10 "	65 1/4 " " " 384 " 10 "
66 1/4 " " " 390 " 10 "	66 1/4 " " " 390 " 10 "	66 1/4 " " " 390 " 10 "
67 1/4 " " " 396 " 10 "	67 1/4 " " " 396 " 10 "	67 1/4 " " " 396 " 10 "
68 1/4 " " " 402 " 10 "	68 1/4 " " " 402 " 10 "	68 1/4 " " " 402 " 10 "
69 1/4 " " " 408 " 10 "	69 1/4 " " " 408 " 10 "	69 1/4 " " " 408 " 10 "
70 1/4 " " " 414 " 10 "	70 1/4 " " " 414 " 10 "	70 1/4 " " " 414 " 10 "
71 1/4 " " " 420 " 10 "	71 1/4 " " " 420 " 10 "	71 1/4 " " " 420 " 10 "
72 1/4 " " " 426 " 10 "	72 1/4 " " " 426 " 10 "	72 1/4 " " " 426 " 10 "
73 1/4 " " " 432 " 10 "	73 1/4 " " " 432 " 10 "	73 1/4 " " " 432 " 10 "
74 1/4 " " " 438 " 10 "	74 1/4 " " " 438 " 10 "	74 1/4 " " " 438 " 10 "
75 1/4 " " " 444 " 10 "	75 1/4 " " " 444 " 10 "	75 1/4 " " " 444 " 10 "
76 1/4 " " " 450 " 10 "	76 1/4 " " " 450 " 10 "	76 1/4 " " " 450 " 10 "
77 1/4 " " " 456 " 10 "	77 1/4 " " " 456 " 10 "	77 1/4 " " " 456 " 10 "
78 1/4 " " " 462 " 10 "	78 1/4 " " " 462 " 10 "	78 1/4 " " " 462 " 10 "
79 1/4 " " " 468 " 10 "	79 1/4 " " " 468 " 10 "	79 1/4 " " " 468 " 10 "
80 1/4 " " " 474 " 10 "	80 1/4 " " " 474 " 10 "	80 1/4 " " " 474 " 10 "
81 1/4 " " " 480 " 10 "	81 1/4 " " " 480 " 10 "	81 1/4 " " " 480 " 10 "
82 1/4 " " " 486 " 10 "	82 1/4 " " " 486 " 10 "	82 1/4 " " " 486

THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Pr.	Business.	Dividends Per Share.	Last Paid.
4000	Bedford United (copper), Tavistock	2 6 8	5 1/2	5 1/2	12 3 6	4 0-Mar. 1861
240	Boscon (tin), St. Just	20 10 0	60		30 10 0	1 10 0-Mar. 1861
200	Botalack (tin), copper, St. Just	91 5 0	210		443 5 0	2 10 0-Feb. 1860
2000	Bronford (lead), Cardiganshire	4 0 0	7 1/2		4 0 0	2 0 0-Jan. 1860
200	Brynford Hall (lead), Flintshire	12 10 0	26		14 8 0	2 10 0-Oct. 1860
1000	Carn Brea (copper, tin), Illogan	15 0 0	92 1/2	92 1/2	745 0 0	2 0 0-Feb. 1861
2048	Carnyorth (tin), St. Just	3 10 0	52 1/2		610 0 0	2 0 0-Sept. 1860
60000	Concorro (copper, sulphur), L. E. 11	1 0 0	52 1/2	51s.	0 9 0	0 9 0-July 1860
12000	Copper Mines of England	25 0 0	25		7 1/2 per cent.	Half-yry.
350000	Ditto ditto (stock)	100 0 0	24		1 per cent.	Half-yry.
1055	Craddock Moor (copper), St. Cleer	8 0 0	27	25 27	5 3 0	0 4 0-Mar. 1861
867	Cwm Erwin (lead), Cardiganshire	7 10 0	12		4 8 0	0 15 0-Mar. 1861
128	Cwmtyth (lead), Cardiganshire	60 0 0	240		222 10 0	5 0 0-Mar. 1861
280	Dewent Mines (sil.-lead), Durham	300 0 0	180		137 0 0	10 0 0-June 1860
1024	Devon Gt. Con. (cop.), Tavist. [S.E.]	1 0 0	950	340 350	745 0 0	7 0 0-Mar. 1861
358	Dolcoath (copper, tin), Camborne	123 15 0	500	470 490	610 0 0	0 0 0-Feb. 1861
512	East Basset (cop.), Redruth [S.E.]	29 10 0	107 1/2	107 1/2	77 0 0	5 0 0-Feb. 1861
6144	East Caradon (copper), St. Cleer [S.E.]	2 14 6	19 1/2	19 1/2	0 7 6	0 5 0-Mar. 1861
200	East Darwen (lead), Cardiganshire	62 0 0	67		74 10 0	1 0 0-Jan. 1861
2048	East Wheal Lovell (tin), Wendron	2 10 0	—		0 5 0	0 0 0-July 1859
1400	Eyan Mining Co. (lead), Derbyshire	5 0 0	38		19 13 4	1 0 0-Dec. 1860
4940	Foway Consols (copper), Tywardreath	4 0 0	5		41 9 0	2 6 0-June 1860
2560	Foxdale, Isle of Man, Limited (lead)	25 0 0	35		61 8 0	1 0 0-Dec. 1860
5000	Frank Mills (lead), Devon	3 15 6	43 1/2		0 5 0	0 2 6-Mar. 1861
486	Graham and St. Aubyn (cop.) [S.E.]	46 10 0	25	19 20	23 0 0	1 0 0-July 1860
6000	Great South Tolgus [S.E.], Redruth	0 14 6	63 1/2	63 1/2	7 13 0	0 0 0-Feb. 1861
1798	Great Wheal Fortune, Breage	18 6 0	19	6 1/2 9 1/2	0 10 0	0 10 0-Mar. 1860
5908	Great Wh. Vor (tin, cop.), Helston [S.E.]	40 0 0	7		0 5 0	0 0 0-Mar. 1861
1024	Herodstot (id.), near Liskeard [S.E.]	8 10 0	37	37 39	12 10 0	1 15 0-Feb. 1861
200	Horward United (lead), Flintshire	37 0 0	31		3 0 0	1 10 0-July 1860
1000	Hibernian Mine Company	92 6 2	—		6 15 0	0 15 0-Feb. 1861
160	Levant (copper, tin), St. Just	2 10 0	140	90 95	1091 0 0	5 0 0-May 1860
400	Lisburne (lead), Cardiganshire, Wales	18 15 0	125		365 10 0	3 0 0-Feb. 1861
9000	Marke Valley (copper), Camborne	4 10 6	64 1/2	64 1/2	0 10 0	0 5 0-Mar. 1861
6000	Mendip Hill (lead), Somerset	3 15 0	1 1/2		0 10 0	0 5 0-Mar. 1861
1800	Miners' Mining Co. (L.), (id.), Wrexham	25 0 0	180		66 15 0	3 17 6-Feb. 1861
90000	Mining Co. of Ireland (cop., lead, coal)	7 0 0	14 1/2	14 1/2	14 0 11	0 4 10-Jan. 1860
610	Mount Pleasant, Mold	4 0 0	25		12 15 7	1 0 0-Mar. 1861
1366	North Gribbler, Redruth	2 7 6	7		0 10 0	0 10 0-Mar. 1861
6000	North Great Work, Breage	1 3 0	4 1/2		0 2 0	0 2 0-May 1860
5000	Oradell (lead), Flintshire	0 8 0	1 1/2		0 6 0	0 9 0-Mar. 1861
6400	Par Consols (cop.), St. Blazey [S.E.]	1 2 6	10	9 10	35 19 6	0 5 0-Mar. 1861
200	Parys Mines (copper), Anglesey [L.]	0 0 0	—		0 5 0	0 5 0-Jan. 1860
200	Phoenix (copper), Llanfyllter, Llanfyllter	100 0 0	435		394 10 0	6 0 0-Nov. 1860
1772	Polbarn (tin), St. Agnes	10 6 7	89	38 40	55 15 0	1 0 0-Feb. 1861
1120	Providence (tin), Uny Lelant [S.E.]	10 6 7	89	38 40	1250 0 0	1 0 0-Feb. 1861
16	Rhosmor (tin), Uny Lelant [S.E.]	10 6 7	89	38 40	33 10 0	1 0 0-Sept. 1860
512	Rosewarne United (cop., tin), Gwnear	15 0 0	22	20 22	341 0 0	5 0 0-Mar. 1861
200	South Caradon (cop.), St. Cleer [S.E.]	1 8 0	310		102 10 0	1 0 0-Mar. 1861
512	South Tolgus (cop.), Redruth, Cornwall	8 0 0	50	42 1/2 45	353 5 0	1 10 0-Mar. 1861
496	South Wheal Frances, Illogan [S.E.]	18 18 0	160		8 15 0	1 10 0-Mar. 1861
280	Spearhead Moor (tin, cop.), St. Just	31 7 9	30		483 5 0	1 0 0-Feb. 1861
910	St. Ives Consols (tin), St. Ives	8 0 0	37 1/2		5 4 0	0 5 0-Feb. 1861
9000	Tamar Consol. (id.), Beeston [S.E.]	2 10 0	13 1/2	13 1/2	10 8 0	0 5 0-Feb. 1861
6000	Tincroft (cop., tin), Pool, Illogan [S.E.]	9 0 0	57 1/2	54 1/2	0 13 6	0 3 0-Mar. 1860
6000	Tolvaaden (copper), Marazion	—	3 1/2	2 1/2	7 0 0	0 10 0-Sept. 1860
572	Trelyon Consols (tin), St. Ives	11 10 0	14	12 1/2 13 1/2	46 4 0	0 4 0-Feb. 1861
200	Trumpet Consols (tin), near Helston	57 10 0	100		8 15 0	1 0 0-Jan. 1861
1024	Wendron Consols (tin), Wendron	11 10 0	18	16 18	21 2 0	0 10 0-Mar. 1861
6000	West Basset (copper), Illogan [S.E.]	1 10 0	18		11 10 0	0 3 0-Oct. 1860
60	West Burton Gill (lead), Yorkshire	50 0 0	—		94 11 2	2 10 0-Mar. 1861
1024	West Caradon (cop.), Liskeard [S.E.]	5 0 0	76 1/2	74 76	0 15 0	1 0 0-Feb. 1861
256	West Damsel (copper), Gwennap	37 0 0	62		0 12 0	0 3 0-May 1860
4000	West Fowey Consols (tin and copper)	7 10 0	62		288 0 0	10 0 0-Feb. 1861
400	W. Wh. Beton (cop.), Camborne [S.E.]	47 10 0	355		568 10 0	2 0 0-April 1861
512	Wheal Basset (copper), Illogan [S.E.]	5 2 6	110	97 1/2 100	927 0 0	2 0 0-Mar. 1861
256	Wheal Buller (cop.), Redruth [S.E.]	5 0 0	125	115 120	84 10 0	4 0 0-Feb. 1861
600	Wheal Clifford (cop.), Gwennap [S.E.]	—	185		0 10 0	0 10 0-Feb. 1861
2000	Wheal Falmouth and Sperris	2 5 0	8		2400 10 0	5 0 0-Feb. 1861
128	Wheal Friendship (copper), Devon	50 0 0	90		10 10 0	1 0 0-Feb. 1860
512	Wheal Jane (silver-lead), Ken	3 10 0	18		0 15 0	0 10 0-July 1860
4000	Wheal Kitty (tin), St. Agnes	4 10 0	1	1 1/2	1 0 15	0 10 0-July 1860
1024	Wheal Kitty (tin), Uny Lelant [S.E.]	4 10 0	1	1 1/2	1 4 0	0 4 0-Dec. 1860
4000	Wheal Ludecott (lead), St. Ives	2 10 0	8	3 1/2 3 1/2	66 10 0	1 10 0-Feb. 1861
896	Wh. Margaret (tin), Uny Lel. [S.E.]	9 17 6	48	48 48	280 5 0	7 0 0-June 1860
100	Wheal Mary (tin), Lelant	36 2 6	440		53 7 6	0 10 0-Mar. 1861
1024	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	16	13 15	270 13 0	7 10 0-Feb. 1861
600	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	16	13 15	43 15 0	1 0 0-Oct. 1860
5040	Wh. Mary Ann (id.), Menheniot [S.E.]	8 0 0	16	13 15	41 17 6	2 12 6-Mar. 1861

[* Dividends paid every two months. † Dividends paid every three months.]

MINES WITH DIVIDENDS IN ABEYANCE.

700	Aberdovey (silver-lead), Merioneth	1 10 0	30		0 10 0	0 10 0-Mar. 1859
5120	Alfred Consols (cop.), Phillack [S.E.]	2 17 1	3	2 1/2 3 1/2	20 3 0	0 2 6-April 1859
1624	Baldwiddien (tin), St. Just	11 5 0	12		12 5 0	0 5 0-Jan. 1854
1200	Brightdale & Froggatt Grove, Derbyshire	3 0 0	3 1/2		5 0 0	0 3 0-April 1858
200	Cefn Cwm Brwyn (lead), Cardiganshire	33 0 0	20		5 0 0	0 3 0-Mar. 1858
2500	Central Miners (lead) [L. E.]	0 15 0	5 1/2		0 4 0	0 4 0-Sept. 1859
6000	Charlotte United, Penruthen	1 16 2	1	18s. 21s.	3 5 0	0 10 0-Sept. 1859
2000	Collacombe (copper), Lamerton	0 0 0	12		85 0 0	0 2 0-June 1857
256	Conduvor (cop., tin), Camborne	20 0 0	85		210 0 0	2 10 0-June 1857
256	Copper Hill (copper), Redruth	48 0 0	87 1/2		0 10 0	0 2 6-Feb. 1859
4072	Devon and Cornwall (copper)	4 16 8	6		16 7 6	1 10 0-Mar. 1857
678	Ding Dong (tin), Guisval	37 14 0	15	12 1/2 13	0 13 6	0 2 0-Sept. 1857
12800	Drake Walls (tin), Calstock	2 1 0	1	1 1/2	0 7 6	0 2 6-Jan. 1858
2048	East Falmouth (sil.-id.), Kenwyn, Ken	2 7 6	2 1/2		305 0 0	2 10 0-Aug. 1858
128	East Falmouth (tin, copper), Pool, Illogan	24 5 0	400		0 5 0	0 5 0-Jan. 1854
1024	East Wh. Margaret (tin, copper)	11 17 6	6		210 0 0	2 10 0-June 1857
5000	General Mining Co. for Ireland (cop., id.)	4 0 0	110		221 10 0	7 10 0-Feb. 1857
119	Great Work (tin), Gernoe	100 0 0	110		216 0 0	2 6 0-Nov. 1856
6000	Hington Down Con. (cop.), Cala [S.E.]	14 15 6	23 1/2	24 1/2	0 6 0	0 2 0-Feb. 1860
20	Laxey Mining Company, Isle of Man	100 0 0	1300		1420 0 0	0 30 0-June 1857
5000	Lewis Mines (tin, copper), St. Erth	6 9 11	8s.	7s. 8s.	0 10 0	0 10 0-Dec. 1855
470	Newtownards Mining Co., Co. Down	50 0 0	35		56 0 0	0 10 0-Sept. 1858
5000	North Dolcoath (copper), Camborne	2 2 6	1 1/2		0 5 0	0 2 6-June 1859
700	North Rooker (copper), Camborne	16 0 0	21		157 0 0	4 0 0-Sept. 1853
1024	Rosewarne and Herland United [S.E.]	4 0 0	9 1/2		210 0 0	2 6 0-June 1857
13000	Sorridge Con. (cop.), Whitechurch [S.E.]	0 14 0	12s.	11s. 13s.	60 0 0	0 20 0-June 1855
128	South Crinins (copper), St. Austell	19 0 0	385		0 3 6	0 1 0-Feb. 1858
200	St. Day United (tin and cop.), Redruth	2 8 0	3 1/2		403 13 6	2 10 0-April 1861
120	Trethellan (cop.), Gwennap, Cornwall	15 10 0	15		80 5 0	2 10 0-April 1860
400	United Mines (copper), Gwennap	45 0 0	75	35 40	0 5 0	0 1 0-July 1858
30000	Valley of Towry (lead), Carnarvon [S.E.]	0 13 6	9s.	8s. 9s.	33 19 0	1 0 0-April 1861
1024	West Providence (tin), St. Erth	14 15 0	3 1/2		4 0 0	1 0 0-Feb. 1859
240	Wheal Bal (tin), St. Just	15 0 0	16		0 5 0	0 5 0-Mar. 1858
4096	Wheal Edward (cop.), Calstock [S.E.]	7 7 6	3 1/2	3 1/2	31 0 0	1 0 0-Sept. 1856
1024	Wheal Gwyllyn (tin), Penruthen	1 0 0	7 1/2	3 1/2 3 1/2	0 10 0	0 10 0-May 1860
430	Wheal Lyle (tin), Wendron	33 0 0	7 1/2		131 15 0	1 10 0-Dec. 1859
1024	Wheal Margery (tin, copper)	15 3 0	8 1/2		10 2 6	0 7 6-Jan. 1854
396	Wheal Seta (tin, copper), Camborne	58 10 0	90	82 1/2 87 1/2	212 6 0	2 6 0-Dec. 1857
1022	Wheal Tremayne (tin, cop.), Gwnear	12 2 6	5		2 12 6	0 2 6-Dec. 1857
4096	Wheal Wrey Consols (lead), St. Ives	3 1 6	—			

FOREIGN MINES.

2464	Burra Burra (cop.), South Australia	5 0 0	137		220 0 0	5 0 0-Feb. 1861
12000	Cobre Copper Co. (cop.), Cuba [S.E.]	40 0 0	41	39 41	92 12 0	2 0 0-Jan. 1861
10000	Copiapu Mining Company, Chile [S.E.]	16 0 0	10	8 10	6 8 0	0 5 0-Jan. 1861
15000	East Indian Coal, Calcutta [L.]	10 0 0	10		7 1/2 per cent.	Yearly.
70000	English and Australian [S.E.]	5 0 0	3 1/2		1 2 6	0 5 0-Feb. 1861
25000	Gen. Macdonell, Nova Scotia [S.E.]	0 23	22 24		17 5 0	0 15 0-Jan. 1861
18000	Kapunda Mining Co., Australia [S.E.]	1 0 0	2 1/2	2 1/2	0 6 0	0 2 0-Dec. 1860
10000	Lunarians (id.), Pozo Ancho, Spain [S.E.]	1 0 0	2 1/2	2 1/2	0 17 3	0 2 6-Aug. 1860
10000	Lunarians (id.), Pozo Ancho, Spain [S.E.]	1 0 0	2 1/2	2 1/2	0 9 6	0 1 6-July 1859
100000	Port Phillip (gold), Clunes [S.E.]	1 0 0	3 1/2	3 1/2	0 3 0	0 1 0-Jan. 1860
11000	St. John del Rey [L.], Brazil [S.E.]	15 0 0	31 1/2	30 1/2	40 15 0	2 0 0-Dec. 1860
20000	West Canada Mining Company [L.]	1 0 0	1 1/2		0 2 0	0 2 0-June 1860

FOREIGN MINES WITH DIVIDENDS IN ABEYANCE.

10000	Altan and Quanganen (cop.), [L. E.]	4 10 0	3		4 5 0	0 15 0-Nov. 1853
10000	Gt. Barrier Land, Min. Ac. N. Ze. [L. E.]	3 10 0	3 1/2		15 per cent.	Nov. 1853
10000	Pontigbaud (sil.-lead), France [S.E.]	20 0 0	6		1 0 0	1 0 0-June 1855
43174	Uny Lelant (sil.), Mexico [S.E.]	28 5 0	6 1/2	6 1/2	1 16 8	0 4 0-Feb. 1853

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
20000	Australian (copper), South Australia [S.E.]	7 7 6	1 1/2	1 1/2	Sept. 1858
75000	Bon Accord, South Australia (copper) [L. E.]	0 17 6	1 1/2	1 1/2	Dec. 1859
6000	Central (silver), [L. E.]	5 0 0	8 1/2		Feb. 1859
17000	Central Italian (copper) [7000 paid]	0 6 0	—		Jan.